

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HARTMANN US INC. and THE HAPPY GROUP INC.
Petitioners

v.

MAURICE J.P. TABONE
Patent Owner

IPR2024-01037
U.S. Patent No. 10,287,070

**PETITION FOR *INTER PARTES* REVIEW
UNDER 35 U.S.C. §312 AND 37 C.F.R. §42.104**

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PETITIONER'S EXHIBIT LIST

Ex.1001	U.S. 10,287,070
Ex.1002	Prosecution History of U.S. 10,287,070
Ex.1003	Declaration of Thomas Dunn under 37 C.F.R. §1.68
Ex.1004	<i>Curriculum Vitae</i> of Thomas Dunn
Ex.1005	Prosecution History of U.S. 12/449,556
Ex.1006	WO 2008/098288
Ex.1007	AU 2007900654
Ex.1008	AU 2007902246
Ex.1009	U.S. 2005/0238764
Ex.1010	GB 2 415 186
Ex.1011	U.S. 1,254,276
Ex.1012	U.S. 3,854,581
Ex.1013	U.S. 3,951,292
Ex.1014	EP 1 558 504
Ex.1015	Reserved
Ex.1016	Reserved
Ex.1017	Complaint in <i>Maurice J.P. Tabone v. Hartmann US Inc., et al.</i> , 4:23-cv-0986 (E.D. Mo.) (Aug. 8, 2023)
Ex.1018	Reserved
Ex.1019	Reserved
Ex.1020	FR 2 441 549

Ex.1021	U.S. 4,280,648
Ex.1022	U.S. 2006/0060493
Ex.1023	U.S. 2,634,039
Ex.1024	Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (June 21, 2022).
Ex.1025	Patent Owner’s Infringement Contentions for U.S. 10,287,070, served in <i>Maurice J.P. Tabone v. Hartmann US Inc., et al.</i> , 4:23-cv-0986 (E.D. Mo.).
Ex.1026	Definition of “flange,” Merriam-Webster’s Collegiate Dictionary (10th ed., 1993) (first excerpt).
Ex.1027	Definition of “generally,” Merriam-Webster’s Collegiate Dictionary (10th ed., 1993) (second excerpt).
Ex.1028	Definition of “continuous,” Merriam-Webster’s Collegiate Dictionary (10th ed., 1993) (third excerpt).
Ex.1029	U.S. 3,285,491
Ex.1030	U.S. 3,298,594

I. INTRODUCTION

Pursuant to 35 U.S.C. §§311, 314(a), and 37 C.F.R. §42.100, Hartmann US, Inc. and The Happy Group Inc. (“Petitioners”) respectfully request that the Board review and cancel as unpatentable under (pre-AIA) §103 claims 1-3, 5, 8, 9, 11, and 16-25 (“Challenged Claims”) of U.S. 10,287,070 (“the ’070 patent,” Ex.1001).

The ’070 patent discloses “a container having a base and a lid” that are connected to one another to form planar areas that “include a substantially flat area suitable for receipt of an adhesive membrane.” Ex.1001, 2:8-16. As shown below and confirmed in the Declaration of Thomas Dunn (Ex.1003), these concepts were well known. Thus, the Petition shows how the Challenged Claims are obvious.

II. GROUNDS FOR STANDING PURSUANT TO 37 C.F.R. §42.104(A)

Petitioner certifies that the ’070 patent is eligible for IPR and that Petitioners are not barred or estopped from requesting IPR of the Challenged Claims.

III. NOTE

Petitioners cite to exhibits’ original page numbers. **Emphasis** in quoted material has been added. Claim terms are presented in *italics*.

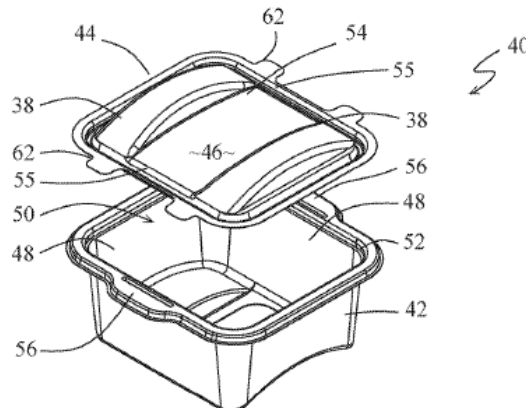
IV. TECHNOLOGY BACKGROUND

The ’070 patent relates to a food container having a base and a lid that are hingedly connected to one another, and an adhesive label on portions of the body to enable product labeling and provide tamper protection. But by 2007, when the

Australian parent applications of the '070 patent were filed (see Section VII, *infra*), containers with a base and a lid that were connected by a hinge were not new. Ex.1001, 1:30-33; Ex.1003, ¶28. Containers with adhesive labels or even tamper-proof labels were also not new. Ex.1011 (adhesive labels); Ex.1012 (pressure sensitive adhesive labels); Ex.1013 (hot-shrunk labels); Ex.1003, ¶28. Petitioners' expert Mr. Dunn describes relevant background predating the '070 patent. *See* Ex.1003, ¶¶26-29.

V. SUMMARY OF THE '070 PATENT

The '070 patent relates to “containers” that have a basic construction of a lid 44 and a base 42 that forms an enclosed cavity intended to hold an unlimited range of objects including fresh food or produce. *See, e.g.*, Ex.1001, 1:18-21, Fig. 5.



Ex.1001, Fig. 5

The structure of the container is not new. Ex.1001, 1:30-33 (“Thermoformed containers suitable for holding fresh food or produce are in common use. Traditionally, these have consisted of a base with a lid, the lid being hinged to the

base or separate therefrom.”). The purported contribution of the ’070 patent is its arrangement of first and second planar areas. Ex.1001, Title (“Container Base and Lid with Planar Area for Flat Application of Adhesive Membrane”). When closed, the planar areas provide a “substantially flat area” that can receive “an adhesive membrane.” Ex.1001, 2:8-16. This membrane can be used for labeling and other purposes such as to provide tamper evidence, all while minimizing visual obstruction through the lid. Ex.1001, 7:59-65. As explained below, these concepts were well known as of the earliest claimed priority date. Ex.1003, ¶34.

VI. PROSECUTION HISTORY

The ’070 patent was allowed without a single office action. Ex.1002, 27-33. Moreover, the Notice of Allowance relies on features not recited in the claims of the ’070 patent, such as a lid that “is required to extend further away from the base than it does into the base” or “coplanar flanges.” Ex.1002, 32 at ¶3. The scope of the Examiner’s review is therefore unclear. Ex.1003, ¶¶35-37.

VII. EFFECTIVE PRIORITY DATE OF THE ’070 PATENT

The ’070 patent claims priority to U.S. Appl. 12/449,556, filed August 12, 2009, which is a National Stage of PCT/AU2008/000173, filed February 12, 2008. It also claims priority to Australian Applications 2007902246, filed April 30, 2007, and 2007900654, filed February 12, 2007. The cited and relied-upon prior art predates February 12, 2007. Accordingly, Petitioners have not undertaken a priority

date analysis in this Petition. Petitioners do not waive any right or opportunity they may have to dispute the priority date in this or another forum where relevant.

VIII. LEVEL OF ORDINARY SKILL IN THE ART

A person of ordinary skill in the art (“POSITA”) in February 2007 would have had a working knowledge of food packaging as is pertinent to the ’070 patent. A POSITA would have had a bachelor’s degree in packaging products, materials, process and platforms, or equivalent, and two years of work experience relating to packaging products, materials, and process and platforms. Lack of professional experience can be remedied by additional education, and vice versa. Ex.1003, ¶41.

IX. CLAIM CONSTRUCTION

Claim terms in IPR are construed according to their “ordinary and customary meaning” to those of skill in the art. 37 C.F.R. §42.100(b). Petitioners submit that, for the purposes of this proceeding and the grounds presented herein, only one term requires construction: *means for mechanically attaching the lid to the base*. See *infra* [18.1]; 37 C.F.R. §42.104(b)(3); Ex.1003, ¶44. The specification states that the lid “may be hinged or otherwise attached to the base in any suitable manner.” Ex.1001, 2:43-44. Fig. 1 depicts an embodiment of the claimed container that includes hinge 16 attaching the lid 14 to base 12 (labeled in Fig. 3). Ex.1001, 4:66-5:2, Figs.1, 3. A “hinge” is, therefore, a structure corresponding to the function of mechanically attaching the lid to the base. Ex.1003, ¶44. No other claim term requires express

construction. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017); *see also* Ex.1003, ¶45.

X. RELIEF REQUESTED AND REASONS FOR THE RELIEF

Petitioners ask that the Board institute a trial for IPR and cancel the Challenged Claims in view of the analysis below.

XI. IDENTIFICATION OF HOW THE CLAIMS ARE UNPATENTABLE

A. Challenged Claims

Patent Owner has asserted the Challenged Claims against Petitioners in a co-pending litigation. A finding the Challenged Claims unpatentable in this proceeding will resolve the parties’ dispute and obviate the need for a trial regarding the ’070 patent, substantially reducing the time and expense of that litigation for all parties.

B. Statutory Grounds for Challenges

Grounds	Claim(s)	Basis
#1	1-3, 5, 8, 9, 11, 16-21, 24, 25	§103 (Pre-AIA) over Beese
#2	22, 23	§103 (Pre-AIA) over Beese and King

U.S. 2005/0238764 (Ex.1009, “**Beese**”); published on Oct. 27, 2005.

U.K. Appl. (GB) 2 415 186 (Ex.1010, “**King**”); published on Dec. 21, 2005.

Beese and King are prior art under §102(b)¹ as these references published

¹ If Patent Owner argues that the ’070 patent is an AIA patent, Beese and King still

more than one year prior to the earliest non-provisional filing date (February 12, 2008) of the '070 patent, and more than one year before the earliest foreign priority date (February 12, 2007) of the '070 patent. None of these references were before the Examiner during prosecution. Ex.1003, ¶¶60, 253.

Petitioners also cite to additional prior art (Exs.1011-1013, 1022-1023, 1029-1030) as evidence of a POSITA's background knowledge and to provide contemporaneous context to support Petitioner's assertions regarding what a POSITA would have understood from the prior art in the grounds. *Yeda Research v. Mylan Pharm. Inc.*, 906 F.3d 1031, 1041-1042 (Fed. Cir. 2018); 37 C.F.R. §42.104(b).

Petitioners' prior art analysis, below, is based at least in part on Petitioners' understanding of claim interpretations contained in Patent Owner's Infringement Contentions (Ex.1025) served in the co-pending district court litigation involving the same parties. Claim construction in the district court litigation has not yet occurred; however, Patent Owner's interpretation of terms can be derived from its application of the patent. Petitioners do not adopt Patent Owner's interpretations but apply them here for judicial efficiency. *10X Genomics, Inc. v. Bio-Rad Laboratories, Inc.*, IPR2020-00087, Paper 9, 16-17 (Apr. 27, 2020) (“[J]udicial efficiency will be

qualify as prior art under AIA 35 U.S.C. §102(a).

enhanced by allowing Petitioner to rely upon a claim construction that Patent Owner is relying upon in the related district court litigation to assert infringement of the challenged patent”); *Western Digital v. Spex Technologies*, IPR2018-00084, Paper 14, 11 (April 25, 2018) (Rule 42.104(b)(3) “does not require Petitioner to express its subjective agreement regarding correctness of its proffered claim constructions or to take ownership of those constructions.”).

C. Ground 1: Claims 1-3, 5, 8, 9, 11, 16-21, 24, 25 are obvious over Beese

1. Beese

Beese discloses an egg container with a “bottom part...and a lid part which is arranged for swing action on the bottom part.” Ex.1009, Abstract; Ex.1003, ¶55. Beese’s containers can be made of any material, including paper pulp. *See* Ex.1009, [0011] (discussing different material thickness), [0002] (citing FR-A-2441549 (Ex.1020) claiming a “molded paper pulp container” (Ex.1021, Title, Abstract) (U.S. equivalent of Ex.1020))).

Beese is analogous art to the ’070 patent at least because it is in the same field of endeavor (e.g., food containers). *Compare* Ex.1001, 1:18-21 (“invention relates to containers intended to hold fresh food or produce”) *with* Ex.1009, [0001] (“invention relates to foodstuffs packaging, in particular an egg box, having a bottom part, which has at least one row of shaped depressions for accommodating separate

articles, in particular eggs”); Ex.1003, ¶57. Indeed, the inventor recognized that egg container art, like Beese, are within the field of endeavor of the ’070 patent and therefore analogous to the ’070 patent at least because the inventor cited EP 1 558 504—disclosing egg cartons—in an IDS during prosecution of the ’070 patent. Ex.1002, 82; Ex.1014, [0009] (“package...for receiving one or more frangible products, such as eggs”); Ex.1003, ¶58; *see Apple Inc. v. Samsung Elecs. Co., Ltd.*, 816 F.3d 788, 803 n.8 (Fed. Cir. 2016), *vacated*, 839 F.3d 1034, 1050-58 (Fed. Cir. 2016) (*en banc*) (“[T]he nature of the prior art listed in an information disclosure statement can be informative as to the field of endeavor.”). Beese is also analogous art to the ’070 patent because it is reasonably pertinent to a problem with which the inventor of the ’070 patent was involved (e.g., creating a container with an adhesive membrane). *Compare* Ex.1001, 2:8-16 (container “suitable for receipt of an adhesive membrane”) *with* Ex.1009, [0030] (sticker 7 “adhesively bonded to the top part 31 of the lid part 3”); Ex.1003, ¶59.

2. Summary of Claim Mapping

For the Board’s convenience, Petitioners provide this mapping summary of select claim terms of the ’070 patent, all of which are described in detail below:

Claim Term	Introduced	Beese
First surface portion [of lid]	[1.3]	Any area of “front part 33”
Flange	[1.7]	The “retaining nose 24”

Claim Term	Introduced	Beese
Second surface portion [of flange]	[1.7]	Any area of the front, externally facing surface of “retaining nose 24”
Surface configuration	[1.13]	When the container is closed, the area of coplanarity between (i) an area of “front part 33” and (ii) an area of the front, externally facing surface of “retaining nose 24”
Immediately adjacent areas with respect to the surface configuration	[1.14]	Any area adjacent to the region of the “front part 33” and the front, externally facing surface of “retaining nose 24” comprising the surface configuration

3. Claim 1

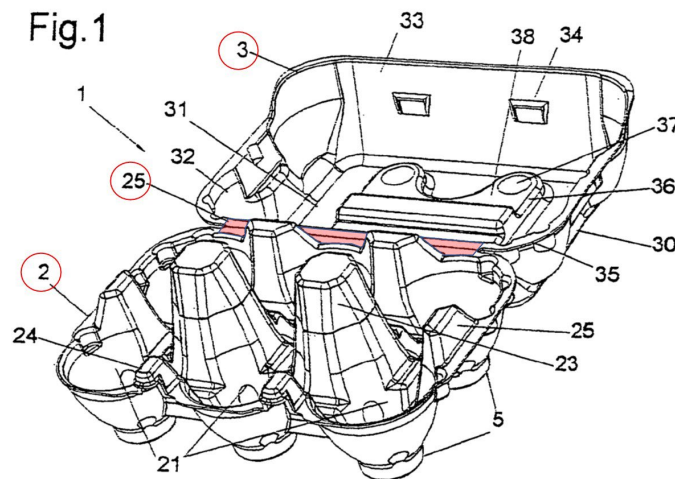
[1.0] *A container comprising*

To the extent the preamble is limiting, Beese discloses an egg box (*container*). Ex.1009, [0001] (“foodstuffs packaging, in particular an egg box”). As explained below, Beese’s egg box renders obvious the claimed features. Ex.1003, ¶62.

[1.1] *an inside, a lid and a base moveable with respect to each other between, an open position and, a closed position, the closed position at least substantially enclosing the inside;*

As shown in Fig. 1, below, Beese’s egg box has a “base part 2” (*base*), a “lid part 3” (*lid*), and a bounded interior (*inside*). Ex.1009, [0025], [0027] (“In the closed state, the lid part 3, together with the base part 2, bounds an interior in which the eggs are arranged[.]”); Ex.1003, ¶67. The “lid part 3” is “fastened for swing action

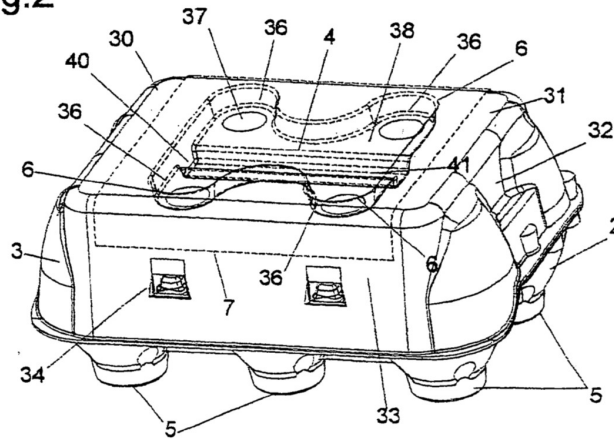
on the bottom part 2 via a flexible hinge 25” (red) which allows “base part 2” to be *moveable with respect* to “lid part 3,” and vice versa. Ex.1009, [0025] (“egg box...illustrated in the swung-open state in FIG. 1”), Fig. 1; Ex.1003, ¶66.



Ex.1009, Fig. 1 (annotated)

In a *closed position*, “the lid part 3 rests on the bottom part 2 and covers over the latter [base part 2] completely,” as shown in Fig. 2, below. Ex.1009, [0025] (“egg box...in the closed state.”); Ex.1003, ¶65. When closed, “eggs are arranged in a protected manner” in the bounded interior. Ex.1009, [0027]. In this way, “lid part 3” and “base part 2” are *at least substantially enclosing the inside*, as shown in Fig. 2. Ex.1009, [0027]; Ex.1003, ¶67.

Fig.2

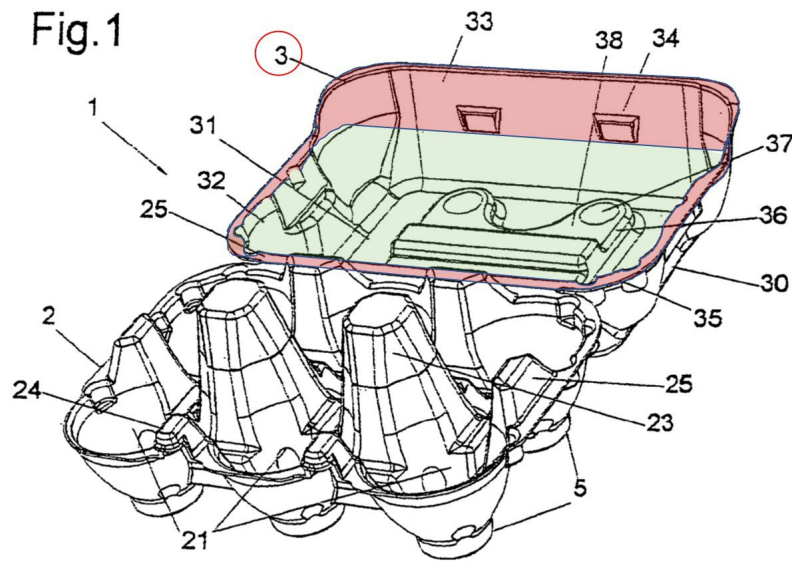


Ex.1009, Fig. 2

In Beese, “[p]ivoting the lid part 3 through approximately 180° about the axis of the flexible hinge 25 moves the lid part 3 into its open position” (*open position*). Ex.1009, [0025]. Thus, “lid part 3” (*lid*) and “base part 2” (*base*) are *moveable with respect to each other between an open position (Fig. 1) and a closed position (Fig. 2)*. Ex.1003, ¶¶65-66.

[1.2] the lid comprising; a lid shape suitable for at least partially enclosing the inside of the container when the container is in the closed position and,

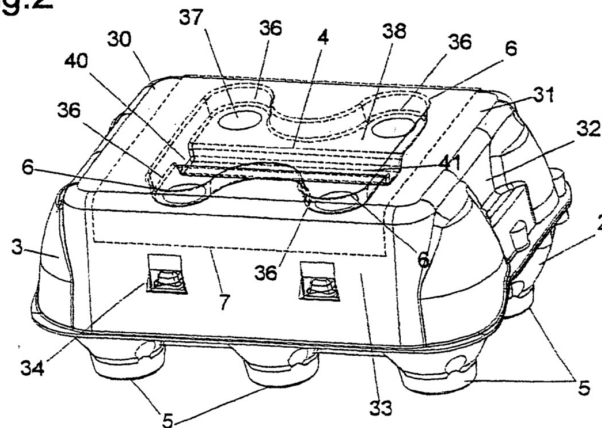
Beese’s “lid part 3” (*lid*) comprises a shape (i.e., *lid shape*) that defines a lid volume (**green**). Ex.1003, ¶70. This is depicted below:



Ex.1009, Fig. 1 (annotated)

In a *closed position*, Beese’s “lid part 3 rests on the bottom part 2 and covers over the latter [base part 2] completely.” Ex.1009, [0025]. The “lid part 3” (*lid*) also encloses the lid volume on the *inside* of the container such that “eggs are arranged in a protected manner” in the bounded interior. Ex.1009, [0027]. In this way, “lid part 3” has a *lid shape suitable for at least partially enclosing the inside of the container in a closed position*, as shown in Fig. 2, below. Ex.1003, ¶72.

Fig.2

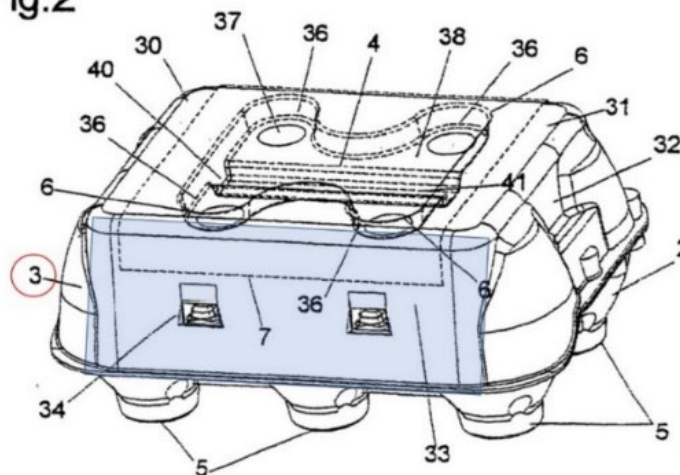


Ex.1009, Fig. 2

[1.3] [the lid comprising] *at least one first surface portion*;

As shown in Fig. 2, below, any area of Beese’s “front part 33” (blue) of “lid part 3” is the *at least one first surface portion* of the lid. Ex.1009, [0027] (“The lid part 3 is of tray-like configuration and comprises...a front part 33.”); Ex.1003, ¶75.

Fig.2



Ex.1009, Fig. 2 (annotated)

Even a small area of Beese’s “front part 33” that immediately flanks “opening 34” meets this limitation. Ex.1009, [0027] (“The front part 33 contains two openings 34”); Ex.1003, ¶76. This is depicted below:

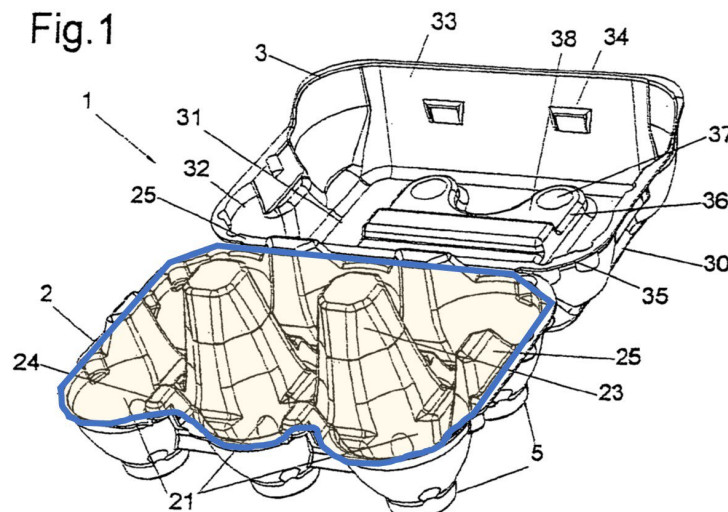


Ex.1009, Fig. 2 (annotated partial view)

This mapping is consistent with how Patent Owner interprets its claims in its infringement contentions. Ex.1025, 2-3.

[1.4] the base comprising: an internal cavity having an opening suitable for receipt of contents into the internal cavity;

Beese’s “base part 2” (*base*) comprises an *internal cavity* (yellow), as shown in Fig. 1, below. Ex.1009, Fig. 1; Ex.1003, ¶79. This *cavity* has an *opening* that is outlined by a rim (blue) of the “base part 2” (*base*). Ex.1009, Fig. 1; Ex.1003, ¶79.

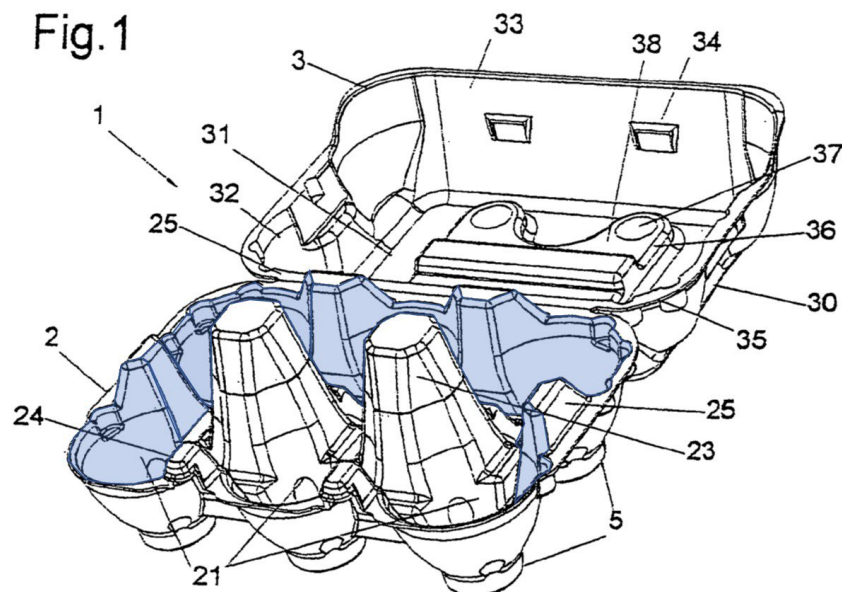


Ex.1009, Fig. 1 (annotated)

The *internal cavity* “bounds an interior” where eggs are stored. Ex.1009, [0027]. The *internal cavity* is also divided into “shaped depressions 21” that accommodate eggs and ensure that “eggs inserted therein do not come into contact with one another.” Ex.1009, [0026]. In this way, the *opening* of the *internal cavity* is *suitable for receipt of contents into the internal cavity*. Ex.1003, ¶80.

[1.5] [the base comprising] *at least one sidewall comprising an internal surface with respect to the internal cavity;*

Beese’s “base part 2” (*base*) includes *at least one sidewall*, each of which has two surfaces: inside (surface facing the interior of container) and outside (exterior surface). Ex.1003, ¶83. In Fig. 1, the inside surface of the *sidewalls* (blue) is the *internal surface with respect to the internal cavity*. Ex.1003, ¶83.



Ex.1009, Fig. 1 (annotated)

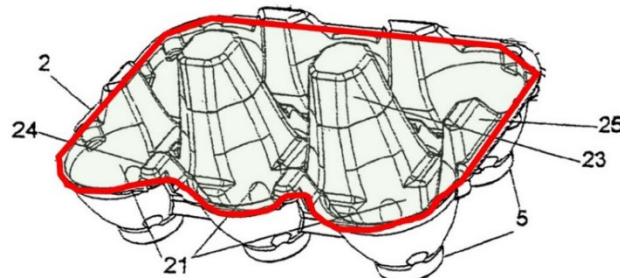
While the perspective of Fig. 1 depicts only three internal *sidewalls* of “base part 2” (*base*), i.e., sidewalls on the left, back, and right of Beese’s container, a POSITA would have appreciated that the internal sidewalls of “base part 2” wrap around the front of the container, which is the side opposite the “flexible hinge 25” and includes “retaining noses 24.” Ex.1009, [0026] (“two retaining noses 24 are arranged on a front side of the base part 2”); Ex.1003, ¶84. Beese expressly teaches its “shaped depressions 21,” shown in Fig. 1, above, accommodate eggs. Ex.1009, [0026] (“base part 2 has a plurality of shaped depressions 21 for accommodating eggs.”). The “shaped depressions 21 are formed by a corresponding configuration of *the wall of the base part 2* and by two supports 23 arranged in the centre.” Ex.1009, [0026]; Ex.1003, ¶83. Thus, a POSITA would have understood that Beese’s “base part 2” includes *at least one sidewall* where the sidewall *compris[es] an internal surface with respect to the internal cavity*. Ex.1009, Fig. 1; Ex.1003, ¶85.

[1.6] wherein, when the container is in the open position and the lid is removed from the base, the base further comprises, a maximum potential internal base volume defined within inner extremities of the base and at least partially defined by one of, the internal surface of the at least one sidewall, the opening and the internal cavity;

When Beese’s container is *open* (see Fig. 1), “lid part 3” *is removed from* “base part 2” because the “front part 33” of “lid part 3” is no longer resting on “base part 2” (*base*). Ex.1009, Fig. 1; Ex.1003, ¶87. This mapping is consistent with how Patent Owner interprets its claims in its infringement contentions. Ex.1025, 3-4.

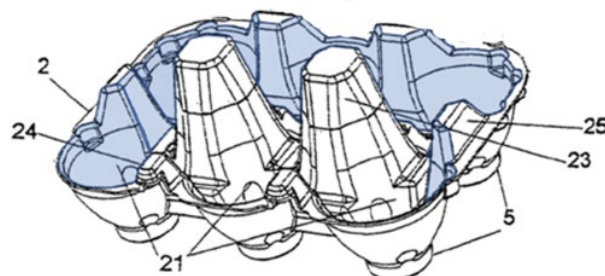
When the container is *open*, Beese’s “base part 2” (*base*) comprises a *maximum potential internal base volume* which is the volume of the “base part 2” where eggs are stored inside the container. This volume is *defined within the inner extremities of the base* as defined by *at least...one of* the following physical structures of Beese’s “base part 2,” as shown below:

(1) ceiling of “base part 2” which is the plane (**green**) *defined by* the rim of “base part 2” (**red**) *outlining its opening, i.e., opening [of] the internal cavity*;



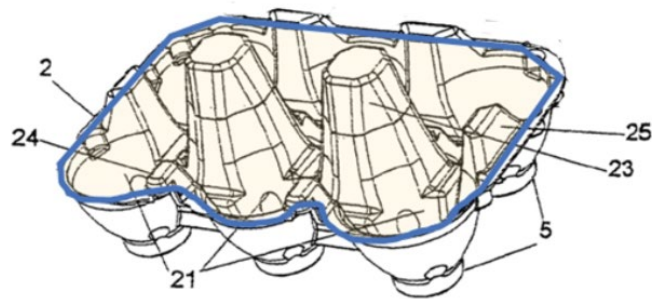
Ex.1009, Fig. 1 (annotated partial view)

(2) internal sidewalls of “base part 2” (**blue**), *i.e., internal surface of the at least one sidewall*; and



Ex.1009, Fig. 1 (annotated partial view)

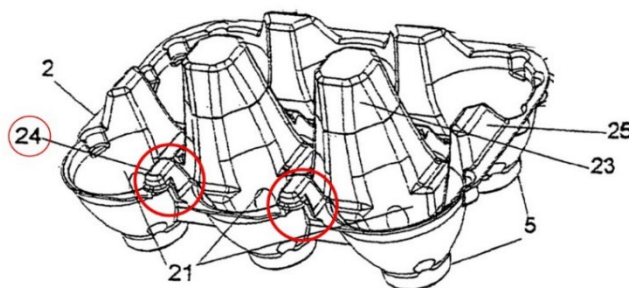
(3) space occupied below the ceiling plane around “shaped depressions 21” (**yellow**), *i.e., internal cavity*. Ex.1003, ¶¶88-90. This is depicted below:



Ex.1009, Fig. 1 (annotated partial view)

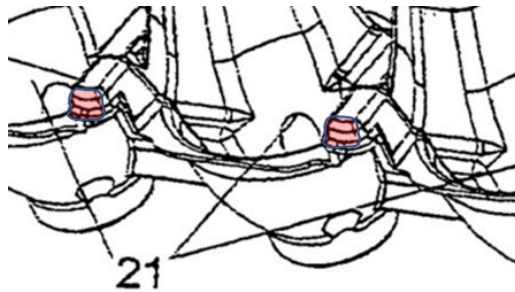
[1.7] *at least one flange portion extended from the base, a flange portion comprising a second surface portion wherein the second surface portion comprises a continuation of the internal surface of the at least one sidewall;*

First, Beese’s “base part 2” (*base*) includes a “retaining nose[] 24,” which is the claimed *at least one flange portion*, on the front side of the base. Ex.1009, [0026] (“two retaining noses 24 are arranged on a front side of the base part 2.”); Ex.1003, ¶93. As shown, Beese’s “retaining nose 24” (*at least one flange portion*) extend[s] from “base part 2” (*base*) away from the internal cavity of “base part 2.” Ex.1003, ¶93 (citing Ex.1026, 442) (definition of “flange”). This is depicted below:



Ex.1009, Fig. 1 (annotated partial view)

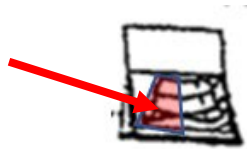
Second, “retaining nose 24” has a front, externally facing surface (**red**). Ex.1003, ¶94.



Ex.1009, Fig. 1 (annotated partial view)

Any area of Beese's front, externally facing surface of "retaining nose 24" that is immediately within "opening[] 34" of "lid part 3" when the container is closed is the *second surface portion* of the *at least one flange portion*. Ex.1003, ¶95. This is depicted below:

second surface portion



Ex.1009, Fig. 2 (annotated partial view)

This mapping is consistent with how Patent Owner interprets its claims in its infringement contentions. Ex.1025, 4.

Third, a POSITA would have recognized that the structure of Beese's "retaining nose 24" (*at least one flange*) starts from an *internal surface* of the front sidewall that is not depicted in Fig. 1. Ex.1009, [0026] ("two retaining noses 24 are arranged on a front side of the base part 2"); Ex.1003, ¶98. This is because "retaining nose 24" is depicted in Fig.1 as being a part of the front sidewall of "base part 2" and extending up and externally away from the bottom of "base part 2." Ex.1003, ¶98. The structure of "retaining nose 24" then continues upward as a *continuation of*

the internal surface of the [front] sidewall to create the second surface portion (red) on the externally facing projection that is “retaining nose 24,” as shown in Fig. 1, above. Ex.1009, [0026]; Ex.1003, ¶¶98-99.

A POSITA would have understood that for the *second surface portion* to be a *continuation of the internal surface*, it must track its origin back to an internal surface of the sidewall of “base part 2,” at least because a continuation connotes an extension of a structure. Ex.1003, ¶96. This is consistent with how the ’070 patent depicts a “second planar area.” Ex.1003, ¶97. In Fig. 1, of the ’070 patent, “rim portion 26,” which contains the second planar area, extends from the base and is shown to track its origin back to the base. Ex.1001, Fig. 1, 5:10-11; Ex.1003, ¶97. The “enlarged portion[] 56,” which contains second planar surface, in Fig. 5 is substantively similar. Ex.1001, Fig. 5, 5:29-30; Ex.1003, ¶97.

To the extent Patent Owner contends that Beese’s “retaining nose[] 24” (*at least one flange*) does not comprise a *second surface portion* that comprises a *continuation of the internal surface of the at least one sidewall*, a POSITA would have been motivated and found it obvious to modify Beese’s container so that the *second surface portion* (discussed above with respect to Figs. 1 and 2) of the “retaining nose[] 24” is a continuation of the internal surface of the at least one sidewall by, for example, manufacturing Beese’s container from a molded material, such as pulp or plastic. Ex.1003, ¶100. As explained by Mr. Dunn, before the ’070

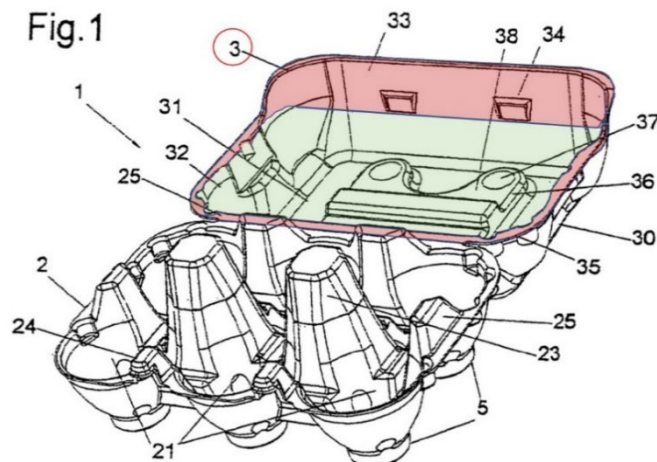
patent, “[m]olded packaging cartons utilizing lug-locking principles [were] widely used [] particularly in the packaging of eggs.” Ex.1003, ¶100 (quoting Ex.1029 (U.S. 3,285,491), 1:13-15). In describing background art of known egg cartons having a bottom part and a hinged lid part, Beese cites FR-A-2441549 (Ex.1020) (Ex.1021, U.S. equivalent), which describes a “molded paper pulp container.” Ex.1009, [0002]; Ex.1021, Title (“Molded Paper Pulp Container”), Abstract (same). Thus, manufacturing Beese’s container from a molded material would have been nothing more than the use of a known technique that would have improved the egg container in Beese in the same way—by simplifying and reducing the cost of manufacturing through a molding process. Ex.1003, ¶100.

Moreover, a POSITA would have understood that the egg container produced from this well-known molding process would have had a unitary construction. Ex.1003, ¶101 (citing Ex.1030 (U.S. 3,298,594), 1:63-2:6) (describing an “egg carton [] formed from a molded plastic material” having a “unitary structure”). As a result, when Beese’s container is manufactured from a molded material and has a unitary construction, a POSITA would have understood that “retaining nose[] 24” would include a second surface portion that comprises a continuation of the internal surface of the at least one sidewall, at least because the *second surface portion and internal surface of the sidewall* are both part of the same “unitary construction,” such

that the *second surface portion* would track its origin back to an *internal surface of the sidewall* of “base part 2.” Ex.1003, ¶101.

[1.8] wherein, when the container is in the closed position, the lid is disposed at least partially beyond the opening of the internal cavity of the base in a generally outward direction with respect to the internal cavity

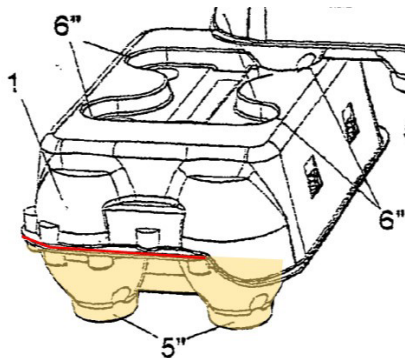
When Beese’s egg box (*container*) is in a *closed position*, “lid part 3 rests on the bottom part 2 and **covers over the latter [base part 2] completely.**” Ex.1009, [0025]. A POSITA would have understood, as shown in Fig. 1, below, that portions of “lid part 3” (**red**) are *disposed at least partially beyond the opening of the internal cavity* of “base part 2.” Ex.1003, ¶103. The footprint of “base part 2” (**green**) is imposed on top of “lid part 3” for illustration. Ex.1003, ¶103. The highlighted portions of “lid part 3” (**red**) extend in a *generally outward direction with respect to the internal cavity* of “base part 2.” Ex.1003, ¶103. This is depicted below:



Ex.1009, Fig. 1 (annotated)

That “lid part 3” extends beyond the opening of the internal cavity in a

generally outward direction is confirmed by Fig. 4. Ex.1003, ¶104. A POSITA would have understood Fig. 4 to show that the outer edge of “lid part 3” rests on the rim of “base part 2” along the side of the container (**red** line) and “front face 33” **extends beyond** the front rim of “base part 2” that defines the opening of “base part 2” (**orange**). Ex.1003, ¶104. This is depicted below:

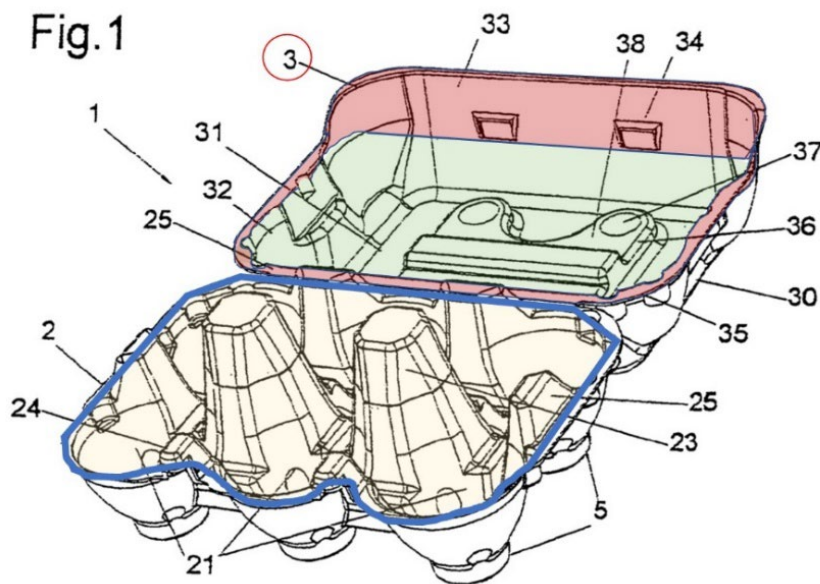


Ex.1009, Fig. 4 (annotated partial view)

[1.9] wherein the lid is suitable to contain at least some of any contents which may extend outwardly from the internal cavity and at least partially beyond the opening to an area outside of the maximum potential internal base volume and,

Beese’s “lid part 3” (*lid*) has a volume (**green**) that is *suitable to contain at least some of any contents* (e.g., eggs). Ex.1009, [0028] (“retaining depressions 36 [in lid part 3] has a **stabilizing effect on the top side of the eggs**”); Ex.1003, ¶110. A POSITA would have understood that the volume (**green**) into which the eggs extend is *outside of the maximum potential internal base volume* (yellow) of “base part 2” (*base*). Ex.1003, ¶109. A POSITA would also have understood that eggs that project into the volume (**green**) of “lid part 3” *extend outwardly from the internal cavity* of “base part 2” and *at least partially beyond the opening* of “base part 2”

(blue). Ex.1003, ¶108. In fact, “lid part 3” includes “retaining depressions 36” that “make[] it possible to prevent undesired movement of the eggs in the shaped depressions.” Ex.1009, [0009], [0028] (“retaining depression 36...makes it possible to avoid damage by way of eggs in adjacent shaped depressions 11 striking against one another as a result of abrupt and rough handling of the egg box.”); Ex.1003, ¶109. Taken together, a POSITA would have understood Beese to teach that “lid part 3” *contains at least some of any contents (e.g., eggs) which may extend outwardly from the internal cavity of “base part 2” and at least partially beyond the opening of “base part 2” to an area outside of the maximum potential internal base volume (yellow)*. Ex.1003, ¶¶110-111. This is depicted below:

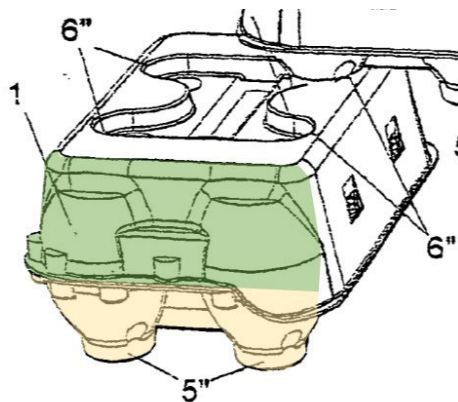


Ex.1009, Fig. 1 (annotated)

[1.10] wherein, the container comprises a total internal volume, the total internal volume being at least partially defined within the inside of the container in the closed position by a substantially internal facing surface of the lid, the total internal volume being no less in volume than the maximum potential internal base volume alone;

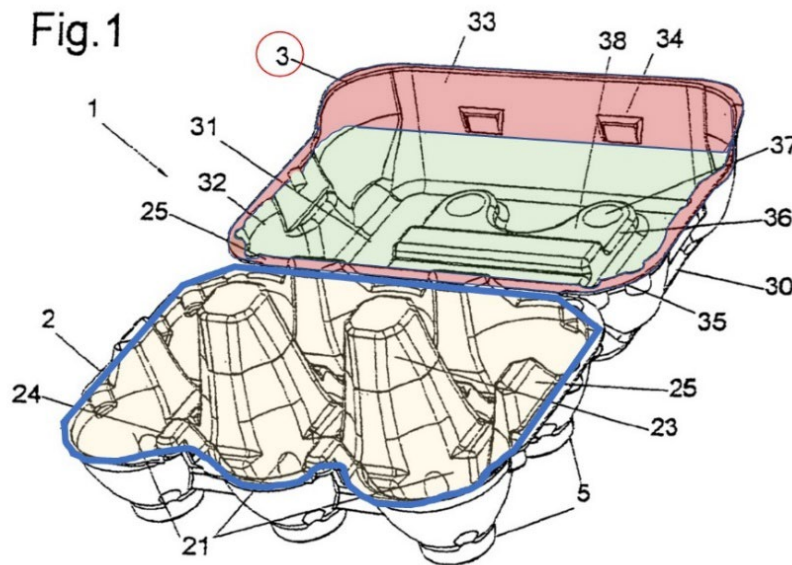
In a *closed position*, Beese's container comprises a total internal volume (green and yellow in cross-section in Fig. 4) that is used to store food (e.g., eggs).

Ex.1009, [0001], Fig. 4; Ex.1003, ¶117. This is depicted below:



Ex.1009, Fig. 4 (annotated partial view)

This *total internal volume* is *at least partially defined within the inside of the container* by the internal sidewalls of “lid part 3” (*lid*) (red), which is the claimed *internal facing surface of the lid*. Ex.1003, ¶116. This is because “lid part 3 rests on the bottom part 2 and covers over the latter [bottom part 2] completely” in a closed state, *closed position*. Ex.1009, [0025]; Ex.1003, ¶115. In other words, the outer bounds of the container's internal storage volume are capped by “lid part 3.” Ex.1003, ¶116. This is depicted below:



Ex.1009, Fig. 1 (annotated)

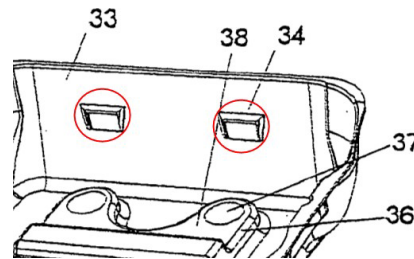
As explained in [1.9], “lid part 3” has a volume (green) and a POSITA would have understood that this volume is outside of, and in addition to, the *maximum potential internal volume* (yellow) of “base part 2” (*base*). Ex.1003, ¶116. As shown in Fig. 4, above, the volume of “lid part 3” increases the volume (green) of the container relative to the *maximum potential internal base volume* (yellow) of “base part 2” (*base*) because “lid part 3” volume is in addition to “base part 2” volume. Ex.1003, ¶117. A POSITA would have therefore understood that, in a closed position, the *total internal volume* of Beese’s container is *no less than maximum potential internal base volume* of the base alone. Ex.1003, ¶117.

[1.11] wherein each first surface portion and each second surface portion of the container in the closed position are disposed at least substantially external with respect to the total internal volume and

As discussed in [1.3] and [1.7], any area of Beese’s “front part 33” (blue) of

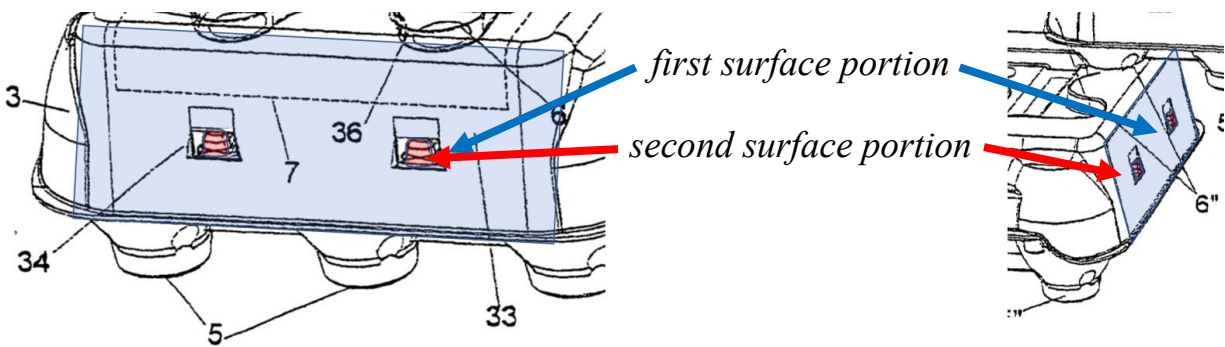
[1.12] wherein, in the closed position, the at least one first surface portion and at least one second surface portion are disposed at least substantially coplanar with respect to each other and

In use, the front, externally facing surface of Beese's "retaining noses 24" are each respectively inserted into one of the "openings 34" in "front part 33" when the container is closed. Ex.1009, [0027] ("openings 34...are intended for interacting with the [retaining] noses 24 for the base part 2 in order to lock the lid part 3, in the closed state, to the base part 2."); Ex.1003, ¶¶124-125. This is depicted below:



Ex.1009, Fig. 1 (annotated partial view)

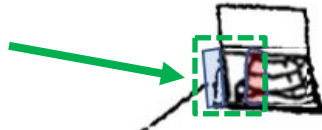
As stated above in [1.3], the *first surface portion* is taught by a small area of Beese's "front part 33" that immediately flanks "openings 34." As stated above in [1.7], the *second surface portion* is any area of Beese's front, externally facing surface of "retaining nose 24" that is immediately within "opening[] 34" of "lid part 3" when the container is closed. In a closed state, the front face of each "retaining nose 24" (**red**) projects into each "opening[] 34" (**blue**). Ex.1003, ¶127. This is depicted below:



Ex.1009, Figs. 2, 4 (annotated partial views)

In the closed state, the *first surface portion* and *second surface portion* are *substantially coplanar* to one another. Ex.1003, ¶¶128-129. This is depicted below:

substantially coplanar



Ex.1009, Fig. 2 (annotated partial view)

This mapping is consistent with how Patent Owner interprets its claims in its infringement contentions. Ex.1025, 6-7.

[1.13] wherein, together, comprise a surface configuration suitable to be overlayed by a membrane layer

Beese renders limitation [1.13] obvious. As discussed in [1.12], in a closed position, an area of the front, externally facing surface of “retaining nose 24” (*second surface portion*) projects into “openings 34” in “front face 33” (an area of which is the *first surface portion*) such that the *first* and *second surface portion[s]* are *substantially coplanar* to one another. Ex.1003, ¶133. The area of coplanarity between the *first* and *second surface portions* comprises a *surface configuration*. Ex.1003, ¶133.

Claim 1 does not require the “*membrane layer*”; it merely requires the *surface configuration* be *suitable to be overlayed* by the “*membrane layer*.” In any case, Beese renders the *membrane layer* of [1.13] obvious. Ex.1003, ¶131.

Beese’s “sticker 7” (*membrane layer*) is attached to *overlay[]* the *surface configuration* of the *first* and *second surface portion[s]*. Ex.1003, ¶¶133-135. Beese’s “sticker 7...**may be of any desired size**” and “**its front side may...be extended as far as the bottom edge of the front part 33 of the lid part 3.**” Ex.1009, [0030]. Thus, as shown below, “front face 33” (*first surface portion*) and front, externally facing surface of “retaining nose 24” (*second surface portion*), *together comprise a surface configuration suitable to be overlayed by a membrane layer* (yellow). Ex.1003, ¶138.

Fig.2

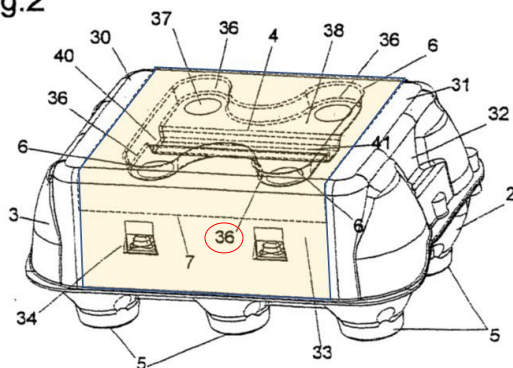
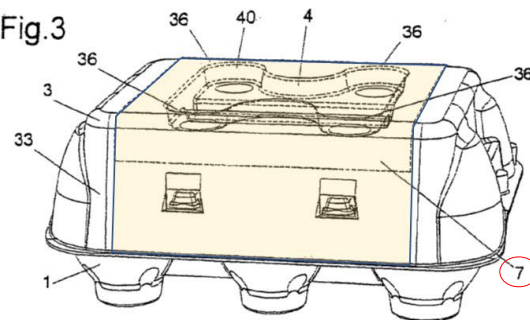


Fig.3

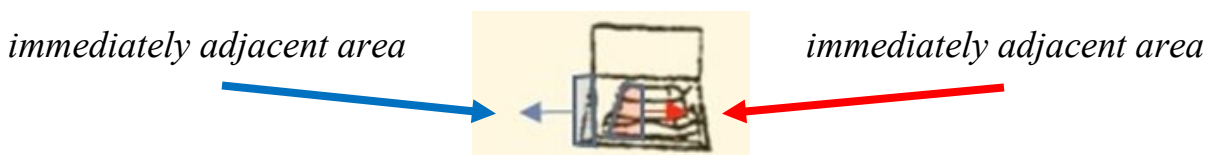


Ex.1009, Figs. 2, 3 (annotated based on Ex.1009, [0030])

[1.14] wherein, the membrane layer continues beyond the surface configuration in two substantially opposite directions to further overlay two immediately adjacent areas with respect to the surface configuration

First, as discussed in [1.3], [1.7], and [1.12], Beese’s front, externally facing surface of “retaining nose 24” (*second surface portion*) is inserted into “openings 34” in “front part 33” (*first surface portion*) when the container is closed. Ex.1003, ¶142. This forms a *surface configuration* that is met with a portion of “front part 33” (*blue*) and “retaining nose 24” (*red*), respectively. Ex.1003, ¶142. As discussed in [1.13], the *surface configuration* is suitable to be overlayed by a *membrane layer*. Ex.1003, ¶142.

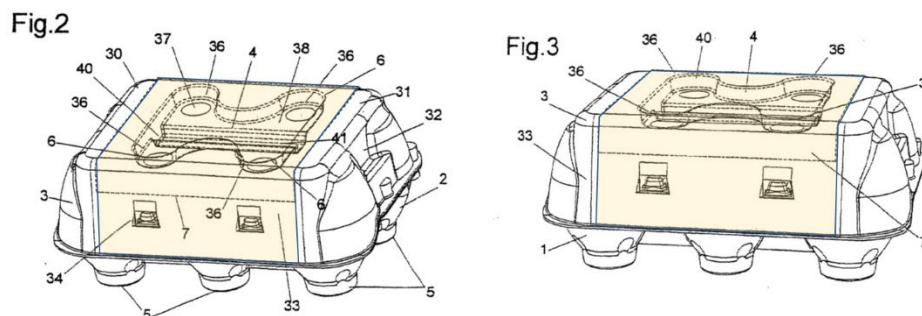
Second, Beese’s “sticker 7” (*membrane layer*) extends to the “bottom edge of the front part 33 of the lid part 3.” Ex.1009, [0030]. As the *surface configuration* is met with a portion of “front part 33” and “retaining nose 24,” and “sticker 7” extends to the bottom of “front part 33,” a POSITA would have understood that “sticker 7” continues beyond the *surface configuration* in two substantially opposite directions (small *blue* and *red* arrows in opposite directions) to cover further *immediately adjacent areas* with respect to the *surface configuration*: *adjacent areas* of “front part 33” and “retaining nose 24.” Ex.1003, ¶¶143-145.



Ex.1009, Fig. 3 (annotated partial view)

[1.16] wherein, while overlaying the surface configuration and the two immediately adjacent areas, the membrane layer at least substantially contours to the underlying outer shape of the container and is substantially flat.

As discussed in [1.13], Beese’s “sticker 7” (*membrane layer*) may be “considerably larger” such that **“its front side may...be extended as far as the bottom edge of the front part 33 of the lid part 3.”** Ex.1009, [0030]; Ex.1003, ¶153. In overlaying the *surface configuration*, Beese’s “sticker 7” also *substantially contours to the underlying outer shape of the container*. Ex.1003, ¶154. This is at least because, as shown below, “sticker 7” adheres to the outside of Beese’s *container* and “sticker 7” functions to “hid[e]...the item which has been inserted” into the *container*. Ex.1009, [0030]; Ex.1003, ¶154. If “sticker 7” did not substantially contour to the outer shape of the egg box, it would not achieve its function. Ex.1003, ¶154. For the same reasons, a POSITA would have understood that “sticker 7” is *substantially flat* with respect to both “front part 33” and the front, externally facing surface of “retaining nose 24” that is substantially coplanar with “front part 33” when the container is closed. Ex.1003, ¶154.



Ex.1009, Figs. 2, 3 (annotated based on Ex.1009, [0030])

This mapping is consistent with how Patent Owner interprets its claims in its infringement contentions. Ex.1025, 8.

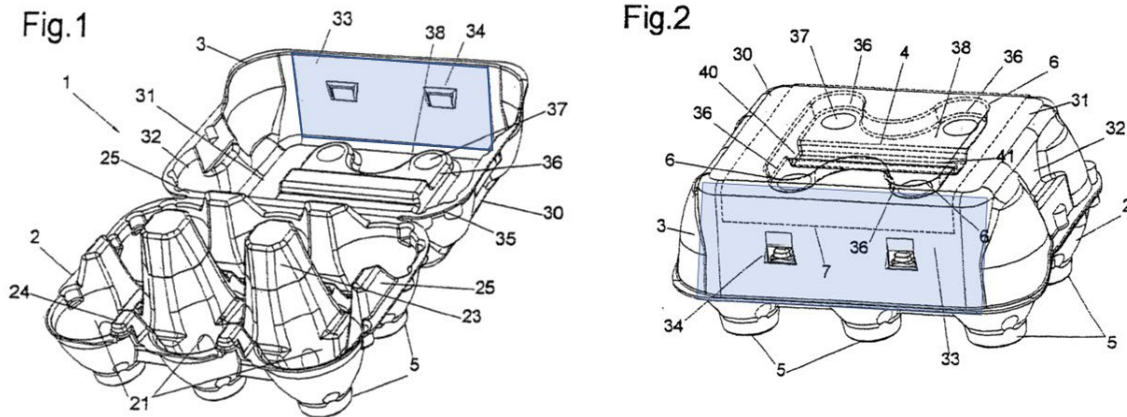
4. Claim 2

[2.0] *The container of claim 1*

Beese renders obvious the *container* of claim 1. Ex.1003, ¶156.

[2.1] *wherein the lid is comprised of a material comprising two opposing sides with respect to each other, each opposing side comprising a generally continuous surface*

Beese’s “lid part 3” has a “front part 33” that is made from a *material* that has an inside (surface facing the interior of container) and outside (exterior surface). Ex.1003, ¶160. These surfaces are *two opposing sides with respect to each other* as they are on opposite sides of “front part 33.” Ex.1003, ¶160. Each surface is *generally continuous* because the substantial majority of each surface is without interruptions. Ex.1003, ¶160 (citing Ex.1027, 485; Ex.1028, 251). This is depicted below:



Ex.1009, Figs. 1, 2 (annotated)

This mapping is consistent with how Patent Owner interprets its claims in its infringement contentions. Ex.1025, 8-10.

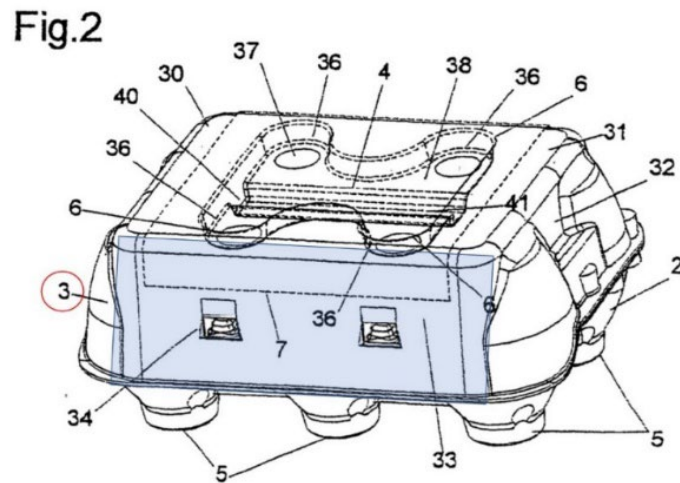
[2.2] wherein, the at least one first surface portion is disposed on the generally continuous surface of one of the two opposing sides and,

As discussed in [1.3], any area of Beese’s “front part 33” is the *first surface portion* of the *lid*. Ex.1003, ¶163. This is depicted below:



Ex.1009, Fig. 2 (annotated partial view)

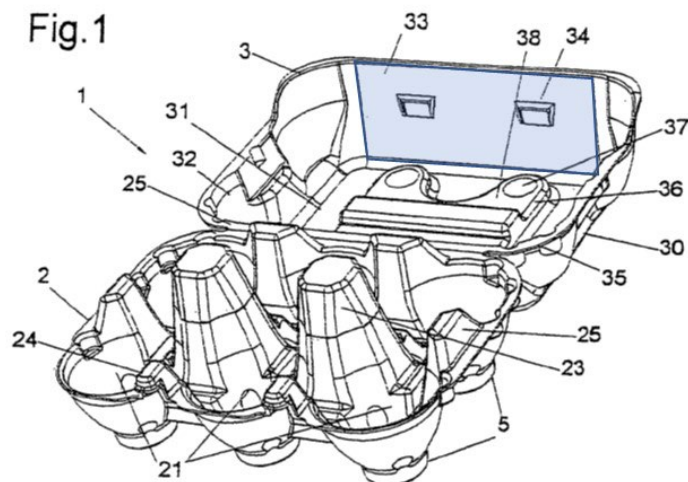
As discussed in [2.1], “front part 33” (*one of the two opposing sides* of “lid part 3”) is *disposed on the generally continuous surface*, i.e., on the outside (exterior surface) of “lid part 3.” Ex.1003, ¶164. This is depicted below:



Ex.1009, Fig. 2 (annotated)

[2.3] *wherein, the substantially internal facing surface of the lid is disposed on the generally continuous surface of the other opposing side.*

As discussed in [2.1], as shown below, the *internal facing surface* of Beese’s “lid part 3” (surface facing the interior of container) is *disposed on the generally continuous surface of the other opposing side* of “front part 33.” Ex.1003, ¶167.



Ex.1009, Fig. 1 (annotated)

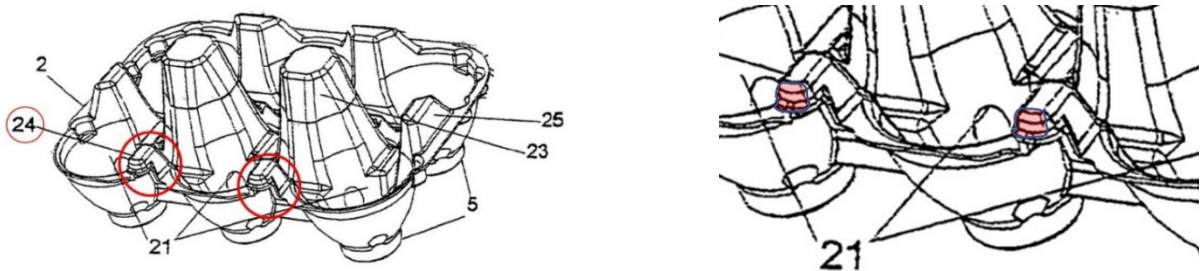
5. Claim 3

[3.0] *The container of claim 2*

Beese renders obvious the *container* of claim 2. Ex.1003, ¶169.

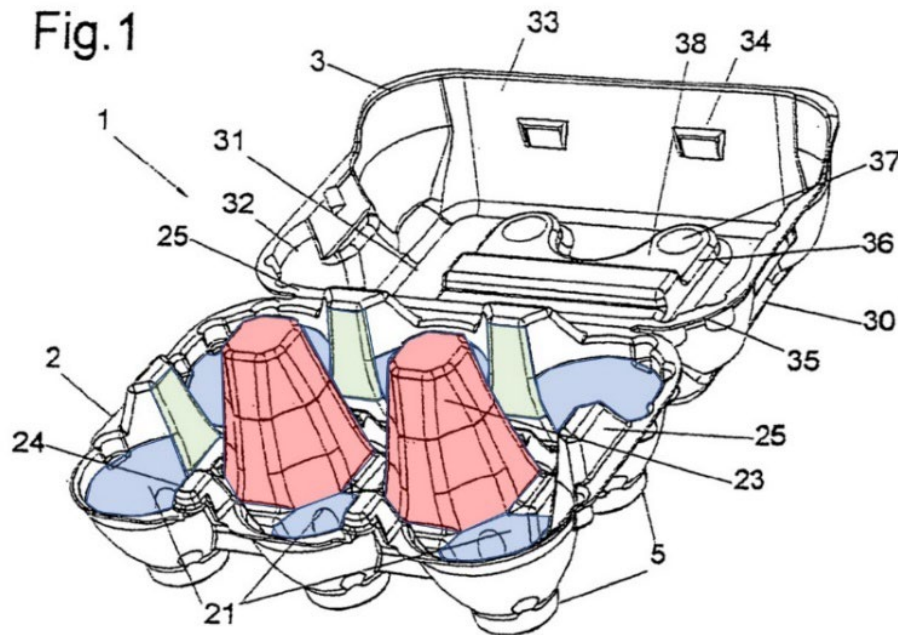
[3.1] *wherein, each second surface portion is substantially outside of the largest inner perimeter of the opening of the base.*

As discussed in [1.7], any area of the front, externally facing surface of Beese’s “retaining nose 24” is the *second surface portion*. Ex.1003, ¶171. The front, externally facing surface of “retaining nose 24” (red) is located on the external portion of “base part 2” (*base*). Ex.1003, ¶171. This is depicted below:



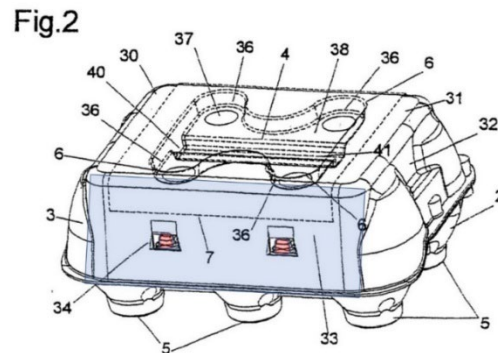
Ex.1009, Fig. 1 (annotated partial view)

As discussed in [1.4], the *inner perimeter of the opening* of “base part 2” is defined by the rim of the base (red), as shown in Fig. 1, below. Ex.1003, ¶172. A POSITA would have understood the rim of the base to be the *largest inner perimeter* because the rim defines the *opening*. Ex.1003, ¶172. The “retaining nose 24” (blue), including the front, externally facing surface (*second surface portion*), is thus located *substantially outside of the largest inner perimeter of the opening of the base*, as depicted in Fig. 1, below. Ex.1003, ¶172.



The “lid part 3” includes “retaining depressions 36” (blue) (*depression*) that “limit undesired movement of the top side of the eggs.” Ex.1009, [0028]; Ex.1003, ¶177. The “lid part 3” also includes “upward[ly] curved recesses 37” (red) (*recess*) (Ex.1009, [0028]) and an inward impression of “trough 4” (green) (Ex.1009, [0029]). Ex.1003, ¶177. This is depicted below:

of the container in the closed position. Ex.1003, ¶182. This is depicted below:



Ex.1009, Fig. 2 (annotated)

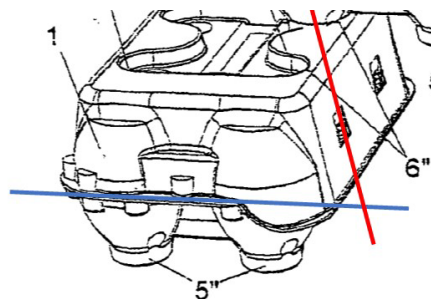
8. Claim 9

[9.0] *The container of claim 2*

Beese renders obvious the *container* of claim 2. Ex.1003, ¶184.

[9.1] *wherein in the closed position, the surface configuration is disposed at an oblique angle to the opening of the base.*

When closed, the plane of Beese's *surface configuration* (as discussed in [1.3], [1.7], [1.12], and [1.13]) is at an *oblique angle* (red line) relative to the plane of the opening of "base part 2" (blue line). Ex.1003, ¶188. This is depicted below:



Ex.1009, Fig. 4 (annotated partial view)

This mapping is consistent with how Patent Owner interprets its claims in its infringement contentions. Ex.1025, 10-11.

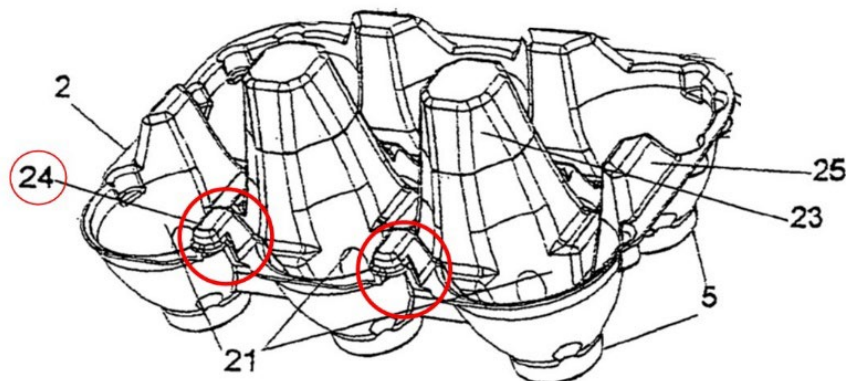
9. Claim 11

[11.0] *The container of claim 2*

Beese renders obvious the *container* of claim 2. Ex.1003, ¶190.

[11.1] *wherein, in the closed position, the at least one flange is comprised of a material comprising two opposing sides with respect to each other, each opposing side comprising a generally continuous surface*

First, as discussed in [1.7], Beese’s “retaining nose 24” on the front side of “base part 2” is the claimed *at least one flange* portion. Ex.1009, [0026]; Ex.1003, ¶192. This is depicted below:



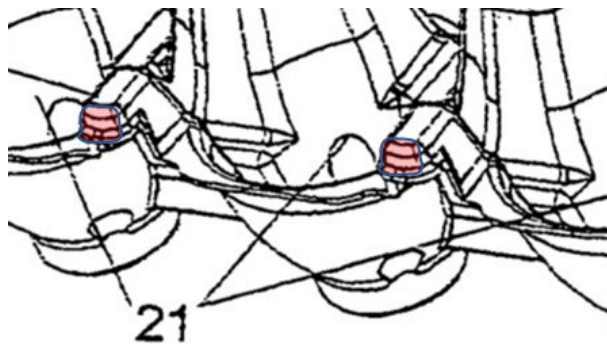
Ex.1009, Fig. 1 (annotated partial view)

Second, as further described in [1.7], the structure of “retaining nose 24” starts from an internal surface of the front sidewall of “base part 2” and continues upward as a continuation of the internal surface to create the “retaining nose 24.” Ex.1003, ¶193. A POSITA would have recognized that the *material* of Beese’s “retaining nose 24” would have *two opposing sides with respect to each other*: one facing the interior of the container and one that is externally facing. Ex.1003, ¶193. This would be true

for the container in an open and *closed position*. Ex.1003, ¶193. The *surface* of each opposing side of “retaining nose 24” is *generally continuous* because the substantial majority of each surface is without interruptions. Ex.1009, Fig. 1; Ex.1003, ¶193; *see also* [2.1], *supra*.

[11.2] wherein, at least one second surface portion is disposed on the generally continuous surface of one of the two opposing sides and,

As discussed in [1.7], any area of the front, externally facing surface of “retaining nose 24” (red) is the *second surface portion*. Ex.1003, ¶196. This is depicted below:

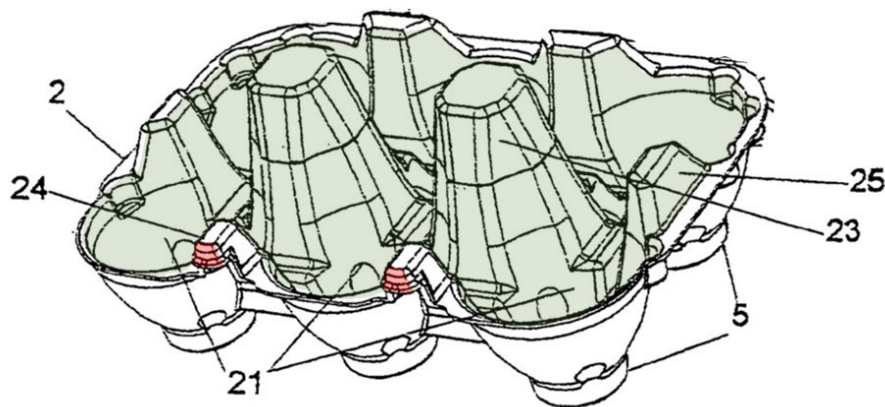


Ex.1009, Fig. 1 (annotated partial view)

A POSITA would have understood, based on Fig. 1, that the front face of Beese’s “retaining nose 24” is disposed on *one of the two opposing sides* of the “retaining nose 24.” Ex.1003, ¶197. As discussed in [11.1], the *surface* of each side of “retaining nose 24” is *generally continuous*. Ex.1003, ¶197.

[11.3] wherein, the generally continuous surface of the other opposing side is disposed at least substantially external with respect to the internal cavity.

As discussed in [1.4], Beese’s “base part 2” (*base*) comprises an *internal cavity* (green). Ex.1009, Fig. 1; Ex.1003, ¶200. The *internal cavity* “bounds an interior” where “eggs are arranged in a protected manner.” Ex.1009, [0027]. The entirety of Beese’s “retaining nose 24” (red), including *the generally continuous surface of the other opposing side*, is at least substantially external to the *internal cavity* of the container. Ex.1003, ¶200. This is depicted below:



Ex.1009, Fig. 1 (annotated partial view)

10. Claim 16

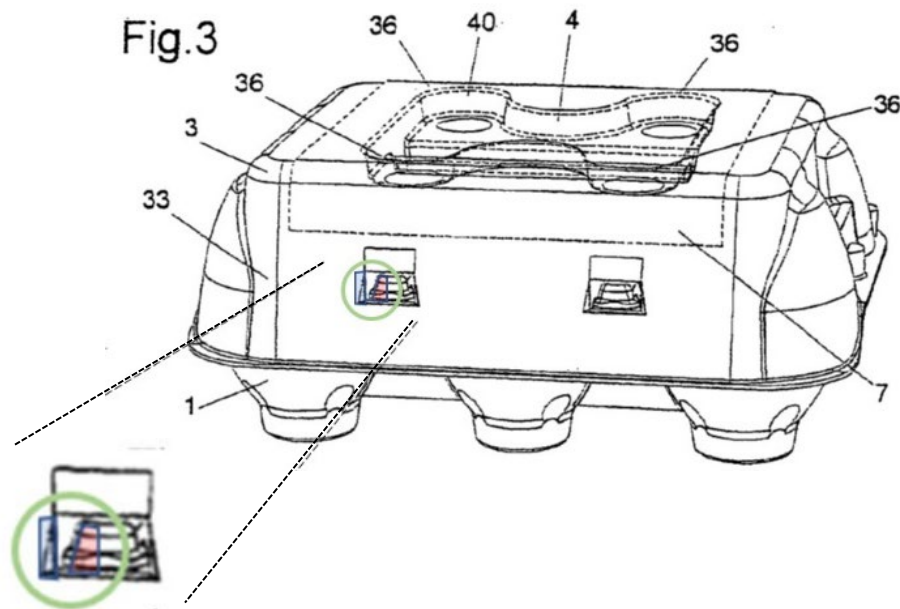
[16.0] The container of claim 1

Beese renders obvious the *container* of claim 1. Ex.1003, ¶202.

[16.1] wherein the surface configuration comprises a circumferential dimension which is substantially less than each of, the largest internal perimeter of the opening of the base and the outermost boundary of the lid.

First, as discussed in [1.3], [1.7], [1.12], and [1.13], the front, externally facing surface of Beese’s “retaining nose 24” (*second surface portion*) is inserted

into each “openings 34” in “front part 33” (*first surface portion*) when the container is closed. Ex.1003, ¶204. The coplanar portions of the *first* and *second surface portion[s]* form a *surface configuration*. Ex.1003, ¶204. The dimensions of the *surface configuration* are undefined in the '070 patent. Ex.1003, ¶204. A POSITA would have thus understood, based on Fig. 3, that the *surface configuration* has a *circumferential dimension* (green circle). Ex.1003, ¶204. This is depicted below:

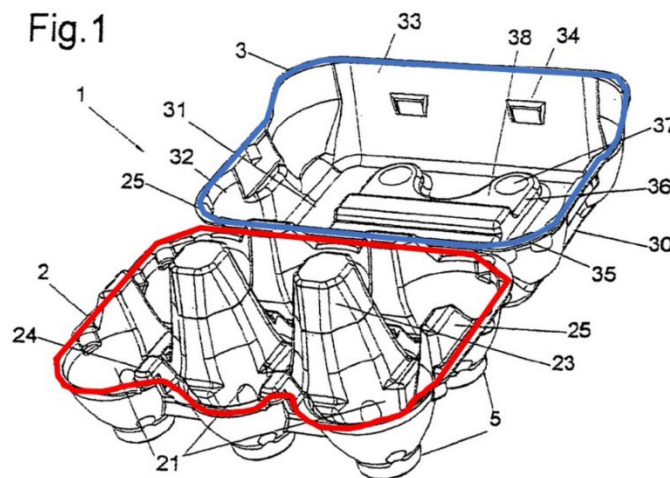


Ex.1009, Fig. 3 (annotated and partial view)

This mapping is consistent with how Patent Owner interprets its claims in its infringement contentions. Ex.1025, 12.

Second, as shown in Fig. 1, below, the perimeter of opening of “base part 2” is defined by the rim of its opening (red). Ex.1003, ¶205. This is the claimed *largest internal perimeter of the opening of the base* because this is the perimeter where the

base ends. Ex.1003, ¶205. The perimeter of “lid part 3” is defined by the rim of its opening (blue). Ex.1003, ¶205. This is the claimed *outermost boundary of the lid* because, like the base, the rim is the point where the lid ends. Ex.1003, ¶205. The *circumferential dimension of surface configuration*, depicted above in Fig. 3, is *substantially less* than each of the *perimeter* and *boundary*. Ex.1003, ¶205.



Ex.1009, Fig. 1 (annotated)

11. Claim 17

[17.0] *The container of claim 1*

Beese renders obvious the *container* of claim 1. Ex.1003, ¶210.

[17.1] *wherein in the closed position, the surface configuration is at least partially disposed at an oblique angle to the opening of the base.*

See analysis in [9.1]. Ex.1003, ¶¶212-213.

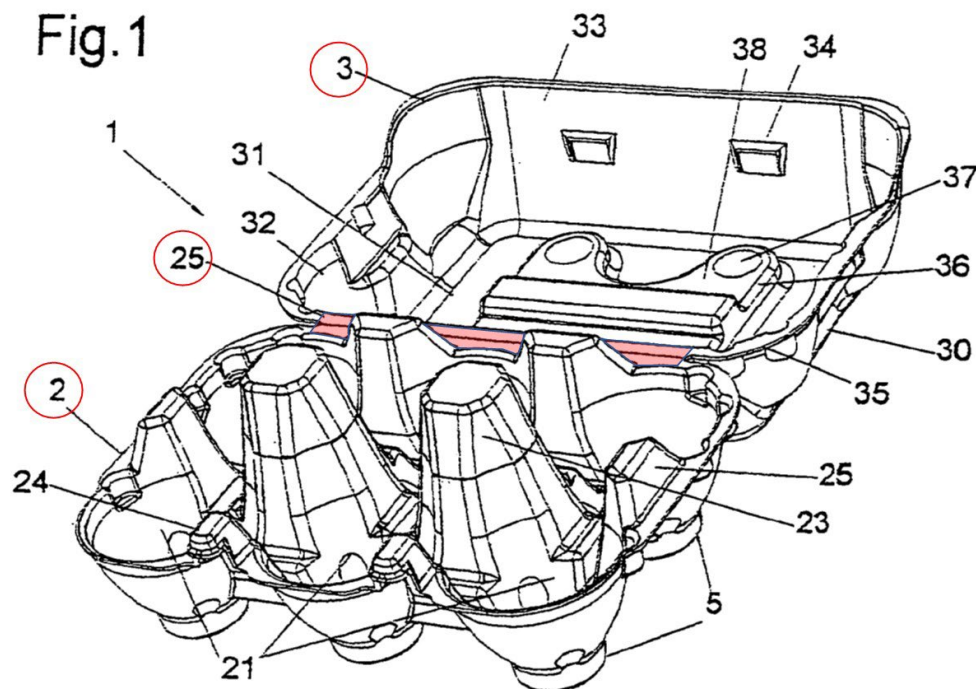
12. Claim 18

[18.0] *The container of claim 1*

Beese renders obvious the *container* of claim 1. Ex.1003, ¶215.

[18.1] *further comprising means for mechanically attaching the lid to the base.*

As discussed in [1.1], and depicted in Fig. 1, below, Beese’s “lid part 3” is “fastened for swing action on the bottom part 2 via a flexible hinge 25” (red). Ex.1009, [0025]; Ex.1003, ¶215. The “flexible hinge 25,” a *means for mechanically attaching, attaches* “lid part 3” (*lid*) to “base part 2” (*base*). Ex.1003, ¶217.



Ex.1009, Fig. 1 (annotated)

13. Claim 19

[19.0] *The container of claim 1*

Beese renders obvious the *container* of claim 1. Ex.1003, ¶219.

[19.1] *further comprising the membrane layer.*

As discussed in [1.13], Beese’s “sticker 7” (*membrane layer*) is “adhesively bonded to the top part 31 of the lid part 3.” Ex.1009, [0030]; Ex.1003, ¶221. Indeed, “sticker 7...**extended as far as the bottom edge of the front part 33 of the lid part 3.**” Ex.1009, [0030]; Ex.1003, ¶¶222-223.

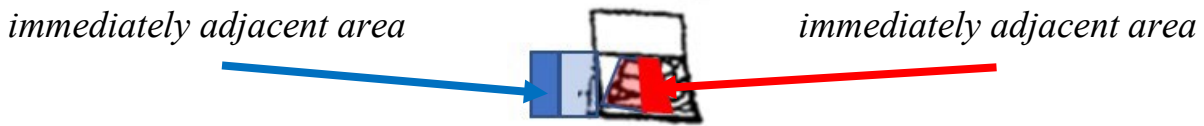
14. Claim 20

[20.0] *The container of claim 19*

Beese renders obvious the *container* of claim 19. Ex.1003, ¶225.

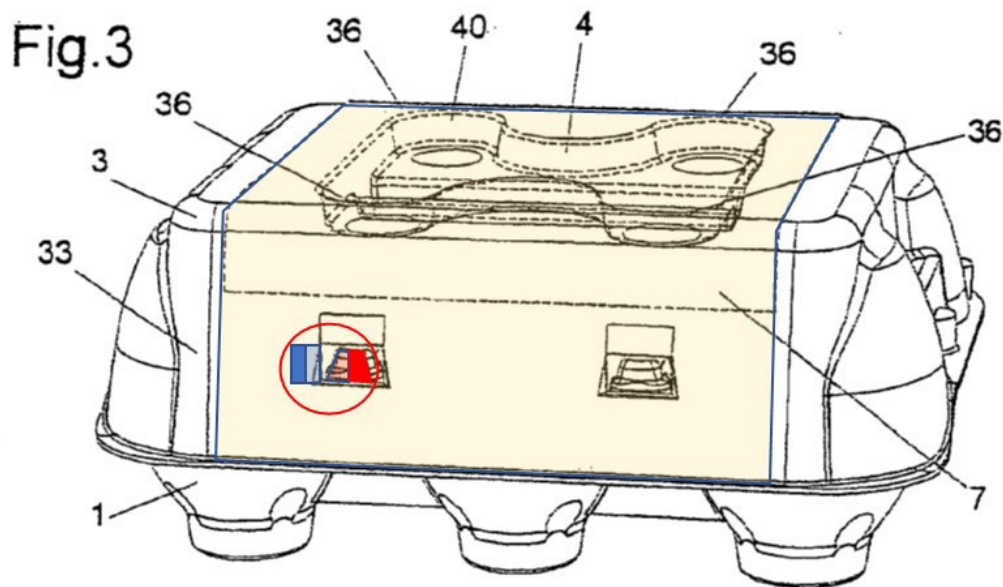
[20.1] *wherein, in the closed position, the overall size of the surface configuration together with the two immediately adjacent areas is, in combination, substantially less in area than the membrane layer.*

First, as discussed in [1.3], [1.7], [1.12], and [1.13], the front, externally facing surface of Beese’s “retaining nose 24” (*second surface portion*) is inserted into each “openings 34” in “front part 33” (*first surface portion*) of “lid part 3” when the container is closed. Ex.1003, ¶227. The resulting *surface configuration* (light blue and light red) is taught by the portion of “front part 33” and “retaining nose 24,” respectively, that are coplanar to one another. Ex.1003, ¶227. As further discussed in [1.14], and shown below, Beese’s “sticker 7” (*membrane layer*) overlays two *immediately adjacent areas* to the surface configuration on the “front part 33” and the front, externally facing surface of “retaining nose 24” (dark red and dark blue, respectively). Ex.1003, ¶228.



Ex.1009, Fig. 2 (annotated partial view)

Second, as discussed in [1.13], Beese’s “sticker 7” may be “considerably larger” such that **“its front side may thus be extended as far as the bottom edge of the front part 33 of the lid part 3.”** Ex.1009, [0030]; Ex.1003, ¶229. A POSITA would have appreciated that the *overall size of the surface configuration*, together with the *immediately adjacent areas*, is *substantially less in area* than “sticker 7,” the *membrane layer*. Ex.1003, ¶229. This is depicted below:



Ex.1009, Fig. 3 (annotated based on Ex.1009, [0030])

15. Claim 21

[21.0] *The container of claim 19*

Beese renders obvious the *container* of claim 19. Ex.1003, ¶231.

[21.1] wherein, in the closed position, the membrane layer is affixed to at least one part of the surface configuration.

See analysis in [1.13]. Ex.1003, ¶233.

16. Claim 24

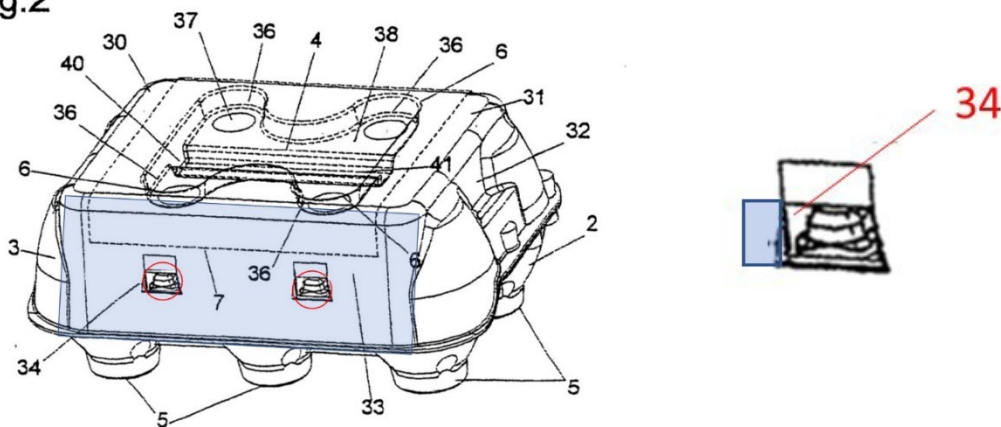
[24.0] The container of claim 1

Beese renders obvious the *container* of claim 1. Ex.1003, ¶235.

[24.1] wherein the at least one first surface portion is adjacent to at least one locating hole on the lid.

As discussed in [1.3], any area of Beese’s “front part 33” (blue) is the *at least one first surface portion*. Ex.1003, ¶237. The “front part 33” includes two “openings 34,” the *at least one locating hole*. Ex.1003, ¶237. As “front part 33” includes “openings 34,” the “openings 34” are *adjacent* to “front part 33.” Ex.1003, ¶¶235-238. This is depicted below:

Fig.2



Ex.1009, Fig. 2 (annotated and partial view)

17. Claim 25

[25.0] *The container of claim 24*

Beese renders obvious the *container* of claim 24. Ex.1003, ¶240.

[25.1] *wherein, in the closed position, the at least one locating hole at least partially locates with at least one second surface portion to comprise the surface configuration.*

As discussed in [1.3], [1.7], [1.12], and [1.13], the front, externally facing surface of Beese’s “retaining nose 24” (*second surface portion*) is inserted into each “openings 34” (*locating hole*) when the container is in a *closed position*. Ex.1003, ¶242. The front face of each “retaining nose 24” projects (*partially locates*) into “openings 34” to form a *substantially coplanar* surface with “front part 33” (*first surface portion*) that creates a *surface configuration* that is taught by coplanar portions of “front part 33” and “retaining nose 24,” respectively. Ex.1003, ¶242.

D. Ground 2: Claims 22 and 23 are obvious over Beese and King

1. King²

King discloses a food container having a lid and a base. Ex.1010, Abstract; Ex.1003, ¶248. A “sheet material” in the form of a label is adhered to “both the base and lid and extends between the same.” Ex.1010, p. 2; Ex.1003, ¶249. King explains it is desirable to provide evidence of whether the container or its contents have been

² Petitioner refers to the original page numbers of King.

tampered with before it has been purchased. Ex.1010, p. 3 (label covering the base and lid “prevents attempts to open the lid without first tearing the label.”); Ex.1003, ¶249. A benefit of its label, then, is to provide this tamper evidence: “if the label is torn then it is clear that the same has been tampered with and that access may have been gained to the contents of the container.” Ex.1010, p. 3; Ex.1003, ¶249.

King is analogous art to the '070 patent at least because it is in the same field of endeavor (e.g., food containers). *Compare* Ex.1001, 1:18-20 *with* Ex.1010, p. 1 (“The invention...relates [] to a container of the type for ... a foodstuff”); Ex.1003, ¶251. King is also analogous art to the '070 patent as it is reasonably pertinent to a problem with which the inventor of the '070 patent was involved (e.g., provide a flat surface to attach a label that can provide temper evidence). *Compare* Ex.1001, 1:21-23 *with* Ex.1010, p. 3 (“Thus, in whichever of the embodiments, the container in accordance with the invention is tamper evident as, if the label is torn then it is clear that the same has been tampered with and that access may have been gained to the contents of the container.”); Ex.1003, ¶252.

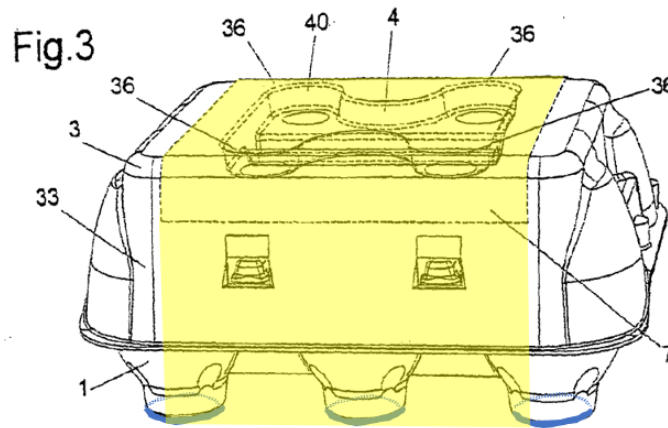
2. Reasons to Combine Beese and King

As an initial matter, Beese and King are both related to food storage containers with locking mechanisms. Ex.1009, [0001] (“The invention relates to foodstuffs packaging, in particular an egg box, having a bottom part...and having a shaped lid part, which is arranged for swing action on the bottom-part and, in the closed state,

bounds an interior together with the bottom part”), [0027] (“In the closed state, the lid part 3, together with the base part 2, bounds an interior in which the eggs are arranged in a protected manner.”); Ex.1010, Abstract (“The container is typically provided in a closed format for retail purposes for purchase and, when it is required to remove at least a portion of the item from the container, the lid is moved to an open position.”); Ex.1003, ¶254. A POSITA, therefore, would have looked to both references when constructing a protective locking egg container. Ex.1003, ¶254.

A POSITA would have been motivated to combine Beese and King because the resulting combination would merely represent the use of a known technique (use of King’s tamper evidence label) to improve a similar container (Beese’s container) in the same way. Ex.1003, ¶255. King teaches the security and tamper evidence benefits of its label that attaches to both the lid and the base: “if the label is torn then it is clear that the same has been tampered with and that access may have been gained to the contents of the container.” Ex.1010, p. 3, p. 4-5 (label “attached to the underside and top of the body and lid, respectively, typically by glue...[a] band 20 joins the body portions 16, 18.”). Indeed, Beese already anticipates that its “sticker 7” may “be extended as far as the bottom edge of the front part 33 of the lid part 3.” Ex.1009, [0030]; Ex.1003, ¶¶255-256. Modifying Beese, per King, would merely require extending Beese’s “sticker 7” even further to attach to both the lid and base of the container to provide security and tamper evidence. Ex.1003, ¶256. For

example, as shown below, Beese’s “sticker 7” (yellow) would attach to the front side surface and/or flat bottom surface (blue) of “clamping elevation 5.” Ex.1009, [0031]; Ex.1003, ¶257.



Ex.1009, Fig. 3 (annotated)

This very simple modification would have been within a POSITA's skillset. Ex.1003, ¶255. It would involve nothing more than creating Beese's "sticker 7" using a larger piece of paper or other material, just like in King. Ex.1003, ¶256.

The combination would also address and improve a real-world situation. Ex.1003, ¶258. Imagine a shopper going into a grocery store to the egg aisle and grabbing an egg container off the shelf. The shopper grabs the egg container with four fingers around the base and lid and their thumb pressing against the front face of the base. A POSITA would recognize that even a small amount of pressure by the thumb on the front face of the base might cause Beese's "retaining nose 24" in "base part 2" to pop out of "openings 34" in the lid. Ex.1003, ¶258. This would cause the lid of the Beese's container to swing open unexpectedly. Ex.1003, ¶258. If this

happens, the shopper might become startled and drop the container entirely or some of its contents. Ex.1003, ¶258. The shopper would also have to take the manual step to close the container before putting it into their shopping cart. Ex.1003, ¶258.

In the combination, Beese’s “openings 34” on “lid part 3” would interact with the “[retaining] nose 24” on “base part 2” “in order to lock” the lid in a closed state to the base. Ex.1009, [0027] (“The front part 33 contains two openings 34, which are intended for interacting with the [retaining] noses 24 for the base part 2 in order to lock the lid part 3, in the closed state, to the base part 2.”). This would provide an initial locking mechanism. Ex.1003, ¶259. Beese’s “sticker 7” would be affixed to “openings 34” and the front, externally facing surface of “retaining nose 24.” Ex.1009, [0030] (“It is also possible for this sticker 7 to be of considerably larger configuration; its front side may thus be extended as far as the bottom edge of the front part 33 of the lid part 3.”); Ex.1003, ¶259. Beese’s “sticker 7” would also be extended so that it is long enough to attach to both “lid part 3” and “base part 2,” per King. Ex.1003, ¶259. The sticker would attach, for example, to the front side surface and/or flat bottom surface of the “clamping elevation 5”—to provide security and tamper evidence. Ex.1003, ¶259. The modification would avoid the lid of the egg container swinging open thereby enhancing the shopping experience and reducing the possibility of product loss. Ex.1003, ¶259. It would also convey to the shopper that the eggs inside the container have not been tampered with, increasing the

shopper's confidence in the product they are purchasing. Ex.1010, p. 3 (“[I]f the label is torn then it is clear that the same has been tampered with and that access may have been gained to the contents of the container.”); Ex.1003, ¶259.

Egg cartons with a locking mechanism and a tamper evidence seal, like the one that would result from the combination of Beese and King, were common. Ex.1003, ¶260. For example, U.S. 2006/0060493 describes an egg container that includes “button tabs 52” on the base (tray) 12 that fit into corresponding “button holes 65” in the lid 14. Ex.1022, [0062], Figs. 12-14 (button tabs 52a, 52b, 52c fit into corresponding button holes 65); Ex.1003, ¶260. The container also includes a “tamper proof seal” that “prevents the lid from being opened with respect to the tray.” Ex.1022, [0071]; Ex.1003, ¶260. Both the locking mechanism and the tamper proof seal are provided in the same container. *See, e.g.*, Ex.1022, [0074]; Ex.1003, ¶260. Similarly, U.S. 2,634,039 involves an egg container where the “lips 10” on the cover “enter the slots of the posts, so that the cover members will be frictionally held firmly in closed position.” Ex.1023, 2:59-3:5; Ex.1003, ¶260. A label is then “applied to the closed cover members” to “seal the container.” Ex.1023, 3:5-8; Ex.1003, ¶260. Again, both the friction-based locking mechanism and a sealing label are provided in the same container. Ex.1003, ¶260.

A POSITA would have had a reasonable expectation of success in combining Beese and King. Ex.1003, ¶261. The combination would require only one

modification: extending Beese's "sticker 7" to attach to both the lid and base of the container. Ex.1003, ¶261. This is a very simple modification, one that is well known in the prior art. Ex.1003, ¶261. An extended "sticker 7" can still be printed with relevant information during manufacture. Ex.1009, [0011] ("This allows the foodstuffs packaging units to be labelled, and provided with the items which are to be inserted, **before being filled.**"), [0030] ("The sticker 7 has the further advantage that it also provides a printing surface which can be utilized for product information or advertising."); Ex.1003, ¶261. The sticker, however, need not be attached to the container during manufacture; it could be attached once the container is filled with eggs. *See, e.g.*, Ex.1023 (label is applied to seal the container after eggs are inside); Ex.1003, ¶261. The sticker could also be attached to only the lid during manufacturing and then attached to the base (and retaining nose 24) by a simple adhesive once the container is filled with eggs. *See, e.g.*, Ex.1023, 3:5-8 (label is "applied to the closed cover members" to "seal the container" after it is filled); Ex.1003, ¶261. A POSITA would have appreciated that extending Beese's "sticker 7" to attach to both the lid and base of the container would not unduly complicate or increase the manufacturing process. Ex.1003, ¶261. To the extent that attaching an extended "sticker 7" adds even a minimal amount of time to the product packing process, this additional time would be justified by its benefits: more secure closing mechanism and tamper evidence. Ex.1003, ¶261.

This combination relies on the combined teachings of Beese and King as understood by a POSITA and not on a physical incorporation of elements from one into another. *In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012); Ex.1003, ¶262.

3. Claim 22

[22.0] *The container of claim 19*

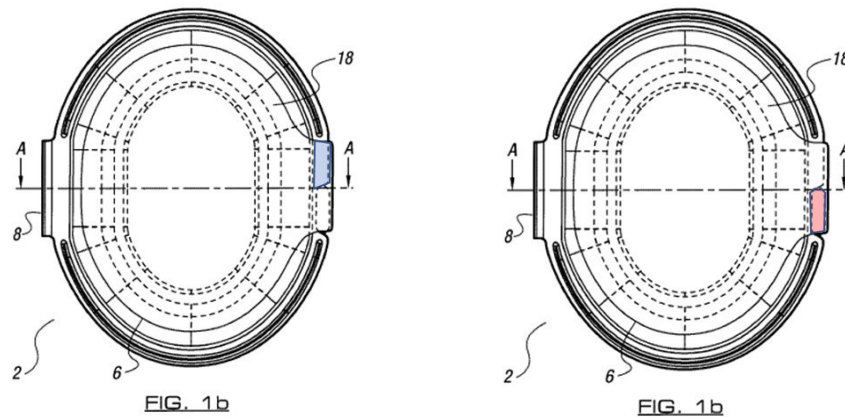
Beese renders obvious the *container* of claim 19. Ex.1003, ¶263.

[22.1] *wherein, the membrane layer creates a seal between the lid and the base of the container in the closed position by affixing to at least both, the at least one first surface portion and, at least one second surface portion.*

As discussed in [1.12] and [1.13], in a *closed position*, the front, externally facing surface of each “retaining nose 24” (*second surface portion*) projects into each “openings 34” in “front part 33” (*first surface portion*) to form an at least substantially coplanar surface that creates a surface configuration that is met with only a portion of “front part 33” and “retaining nose 24,” respectively. Ex.1003, ¶265. Beese’s “sticker 7” (*membrane layer*) is affixed to the surface configuration of the *first* and *second surface portions*. Ex.1003, ¶265.

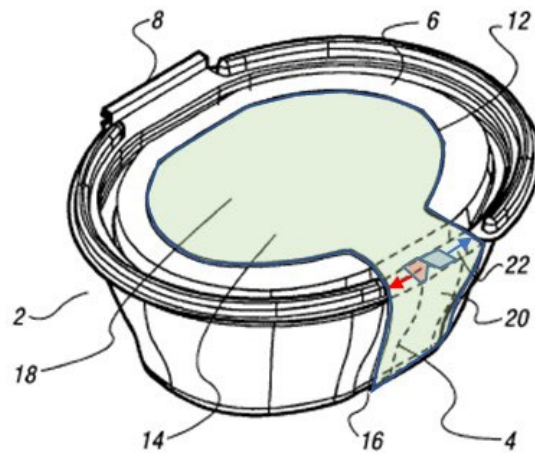
Beese does not, however, explicitly disclose “sticker 7” creating a *seal between the lid and the base*. Ex.1003, ¶266. This is disclosed by King. Ex.1003, ¶266. King’s container has two tabs, one on the lid (**blue**) and one on the base (**red**), as shown below. Ex.1010, p. 2 (“said base and/ or lid include at least one tab to be

gripped to remove the lid from the base”). These tabs correspond to the *first* and *second surface portion[s]* (blue and red, respectively). Ex.1003, ¶267.



Ex.1010, Fig. 1b (annotated)

In Fig. 1a, King’s “label 14” (which corresponds to Beese’s “sticker 7”) is adhered to both the *first* and *second surface portions* because it is depicted as being attached to them. Ex.1010, p. 4 (“label 14...has body portions 16, 18 attached to the underside and top of the body and lid respectively[.]”); Ex.1003, ¶268. The label consists of two body portions, 16 and 18, and is “**attached to the underside and top of the body and lid**, respectively, typically by glue...[and a] band 20 joins the body portions 16, 18.” Ex.1010, p. 4; Ex.1003, ¶268. This is depicted below:



Ex.1010, Fig. 1a (annotated)

King explains that it is desirable to provide tamper evidence: “if the label is torn then it is clear that the same has been tampered with and that access may have been gained to the contents of the container.” Ex.1010, p. 3; Ex.1003, ¶269. A POSITA would have thus understood that King’s label creates a *seal between the lid and the base of the container*. Ex.1003, ¶¶269, 273.

In the combination, Beese’s “sticker 7” would be affixed to “front part 33” and the front, externally facing surface of “retaining nose 24.” Ex.1003, ¶273. Beese’s “sticker 7” would also be extended so that it is long enough to attach to both “lid part 3” and “base part 2,” per King. Ex.1010, pp. 2-4; Ex.1009, [0030] (“sticker 7” may “be extended as far as the bottom edge of the front part 33 of the lid part 3.”); Ex.1003, ¶273. As explained above, “sticker 7” would, for example, attach to the front side surface and/or flat bottom surface of the “clamping elevation 5.” Ex.1009, [0031]; Ex.1003, ¶273.

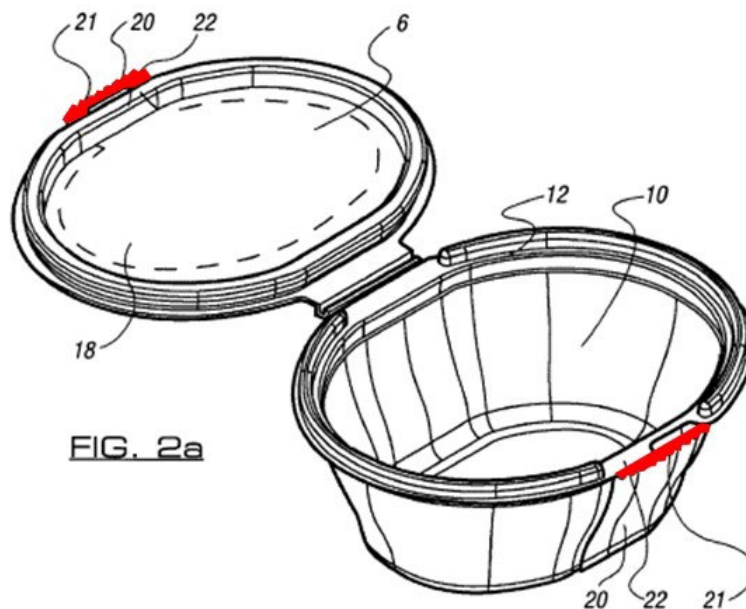
4. Claim 23

[23.0] *The container of claim 22*

Beese renders obvious the *container* of claim 22. Ex.1003, ¶275.

[23.1] *wherein, when the lid is moved from the closed position to the open position, the seal is ruptured and, at least a portion of the membrane layer remains affixed to the lid.*

Beese does not explicitly disclose “sticker 7” creating a seal between the lid and the base and therefore does not address what happens to the sticker when the seal is broken. Ex.1003, ¶277. This is disclosed by King. Ex.1003, ¶277. King explains that “in order to remove the lid from the base it is necessary for the label to be torn,” i.e., *ruptured*. Ex.1010, p. 3; Ex.1003, ¶277. When the container is opened, King discloses that the torn sections of the label (**red**) *remain affixed to the lid* and the base of the container. This is because the label is attached to the container “by glue” and is only “torn at the preferred location.” Ex.1010, p. 4, p. 6; Ex.1003, ¶278. A POSITA would have understood that tearing the label in a preferred location would not impact the remaining portions of the label that are glued to the container. Ex.1003, ¶278. This is depicted below:



Ex.1010, Fig. 2a (annotated)

In the combination, Beese’s “sticker 7” (*membrane layer*) would be affixed to “front part 33” (*first surface portion*) and the front, externally facing surface of “retaining nose 24” (*second surface portion*). Ex.1003, ¶279. Beese’s “sticker 7” would also be extended so that it is long enough to attach to both “lid part 3” and “base part 2,” per King. Ex.1003, ¶279. As explained above, “sticker 7” would, for example, attach to the front side surface and/or flat bottom surface of the “clamping elevation 5.” Ex.1009, [0031]; Ex.1003, ¶279. When the resulting container is opened, “sticker 7” would rupture, with portions of “sticker 7” still adhered (*remain affixed*) to the lid and base of the container, per King. Ex.1003, ¶280.

XII. DISCRETIONARY DENIAL IS NOT APPROPRIATE

A. No Basis for 35 U.S.C. §325(d) Denial

Beese and King were not cited or considered during prosecution of the ’070

patent. Discretionary denial under §325(d) is inappropriate at least because the first part of the *Advanced Bionics* framework is not met. *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 (Feb. 13, 2020) (precedential).

B. No Basis for 35 U.S.C. §314/*Fintiv* Denial

The Board should not discretionarily deny institution based on the co-pending district court litigation involving Patent Owner and Petitioners (*Maurice J.P. Tabone v. Hartmann US Inc., et al.*, 4:23-cv-0986 (E.D. Mo.)). To reduce overlap between the two proceedings, if the Board institutes an IPR trial on this Petition, Petitioners hereby stipulate that Petitioners will not pursue in the co-pending litigation the specific grounds asserted in this petition, or any other ground that could have been reasonably raised in an IPR (i.e., grounds that could have been raised under §§ 102 or 103 on the basis of prior art patent or printed publications). *See Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-00109, Paper 12, 18-19 (Dec. 1, 2020). Pursuant to the Director’s “Interim Procedure for Discretionary Denials,” the Board should not discretionarily deny institution in view of Petitioner’s *Sotera* stipulation. EX1024, 3 (“Consistent with *Sotera Wireless, Inc.*, the PTAB will not discretionarily deny institution in view of parallel district court litigation where a petitioner presents a stipulation not to pursue in a parallel proceeding the same grounds or any grounds that could have reasonably been raised before the PTAB.”), 7 (similar).

C. Discretionary Denial under *General Plastic* is Not Appropriate

The '070 patent has not been challenged in any prior IPR petition, so none of the *General Plastic* discretionary institution factors apply to this Petition. *See General Plastic Indus. Co., Ltd. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19, 16 (Sept. 6, 2016) (Section II.B.4.i. precedential).

XIII. CONCLUSION

Petitioners have established a reasonable likelihood that the Challenged Claims are unpatentable.

Respectfully submitted,

Dated: June 21, 2024
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XIV. MANDATORY NOTICES UNDER 37 C.F.R. §42.8

A. Real Party-in-Interest

Brødrene Hartmann A/S, Hartmann US, Inc., and The Happy Group Inc. are the real parties-in-interest.

B. Related Matters

The '070 Patent is involved in: *Maurice J.P. Tabone v. Hartmann US Inc., et al.*, 4:23-cv-0986 (E.D. Mo.) (filed Aug. 8, 2023) (Ex.1017).

C. Lead and Back-up Counsel and Service Information

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Please address all correspondence to lead and back-up counsel. Petitioner consents to email service as noted above and asks Patent Owner to do the same.

CLAIMS APPENDIX

[1.0] A container comprising

[1.1] an inside, a lid and a base moveable with respect to each other between, an open position and, a closed position, the closed position at least substantially enclosing the inside;

[1.2] the lid comprising; a lid shape suitable for at least partially enclosing the inside of the container when the container is in the closed position and,

[1.3] [the lid comprising] at least one first surface portion;

[1.4] the base comprising: an internal cavity having an opening suitable for receipt of contents into the internal cavity;

[1.5] [the base comprising] at least one sidewall comprising an internal surface with respect to the internal cavity;

[1.6] wherein, when the container is in the open position and the lid is removed from the base, the base further comprises, a maximum potential internal base volume defined within inner extremities of the base and at least partially defined by one of, the internal surface of the at least one sidewall, the opening and the internal cavity;

[1.7] at least one flange portion extended from the base, a flange portion comprising a second surface portion wherein the second surface portion comprises a continuation of the internal surface of the at least one sidewall;

[1.8] wherein, when the container is in the closed position, the lid is disposed at least partially beyond the opening of the internal cavity of the base in a generally outward direction with respect to the internal cavity

[1.9] wherein the lid is suitable to contain at least some of any contents which may extend outwardly from the internal cavity and at least partially beyond the opening to an area outside of the maximum potential internal base volume and,

[1.10] wherein, the container comprises a total internal volume, the total internal volume being at least partially defined within the inside of the container in the closed position by a substantially internal facing surface of the lid, the total internal volume being no less in volume than the maximum potential internal base volume alone;

[1.11] wherein each first surface portion and each second surface portion of the container in the closed position are disposed at least substantially external with respect to the total internal volume and

[1.12] wherein, in the closed position, the at least one first surface portion and at least one second surface portion are disposed at least substantially coplanar with respect to each other and

[1.13] wherein, together, comprise a surface configuration suitable to be overlaid by a membrane layer

[1.14] wherein, the membrane layer continues beyond the surface configuration in two substantially opposite directions to further overlay two immediately adjacent areas with respect to the surface configuration

[1.15] wherein, one of the two immediately adjacent areas is disposed on the at least one flange and the other of the two immediately adjacent areas is disposed on the lid and

[1.16] wherein, while overlaying the surface configuration and the two immediately adjacent areas, the membrane layer at least substantially contours to the underlying outer shape of the container and is substantially flat.

[2.0] The container of claim 1

[2.1] wherein the lid is comprised of a material comprising two opposing sides with respect to each other, each opposing side comprising a generally continuous surface

[2.2] wherein, the at least one first surface portion is disposed on the generally continuous surface of one of the two opposing sides and,

[2.3] wherein, the substantially internal facing surface of the lid is disposed on the generally continuous surface of the other opposing side.

[3.0] The container of claim 2

[3.1] wherein, each second surface portion is substantially outside of the largest inner perimeter of the opening of the base.

[5.0] The container of claim 2

[5.1] comprising at least one of, a rib, a depression and a recess.

[8.0] The container of claim 2

[8.1] wherein, the at least one first surface portion and at least one second surface portion are orientated so that the surface configuration is disposed at least substantially on a side of the container in the closed position when in use.

[9.0] The container of claim 2

[9.1] wherein in the closed position, the surface configuration is disposed at an oblique angle to the opening of the base.

[11.0] The container of claim 2

[11.1] wherein, in the closed position, the at least one flange is comprised of a material comprising two opposing sides with respect to each other, each opposing side comprising a generally continuous surface

[11.2] wherein, at least one second surface portion is disposed on the generally continuous surface of one of the two opposing sides and,

[11.3] wherein, the generally continuous surface of the other opposing side is disposed at least substantially external with respect to the internal cavity.

[16.0] The container of claim 1

[16.1] wherein the surface configuration comprises a circumferential dimension which is substantially less than each of, the largest internal perimeter of the opening of the base and the outermost boundary of the lid.

[17.0] The container of claim 1

[17.1] wherein in the closed position, the surface configuration is at least partially disposed at an oblique angle to the opening of the base.

[18.0] The container of claim 1

[18.1] further comprising means for mechanically attaching the lid to the base.

[19.0] The container of claim 1

[19.1] further comprising the membrane layer.

[20.0] The container of claim 19

[20.1] wherein, in the closed position, the overall size of the surface configuration together with the two immediately adjacent areas is, in combination, substantially less in area than the membrane layer.

[21.0] The container of claim 19

[21.1] wherein, in the closed position, the membrane layer is affixed to at least one part of the surface configuration.

[22.0] The container of claim 19

[22.1] wherein, the membrane layer creates a seal between the lid and the base of the container in the closed position by affixing to at least both, the at least one first surface portion and, at least one second surface portion.

[23.0] The container of claim 22

[23.1] wherein, when the lid is moved from the closed position to the open position, the seal is ruptured and, at least a portion of the membrane layer remains affixed to the lid.

[24.0] The container of claim 1

[24.1] wherein the at least one first surface portion is adjacent to at least one locating hole on the lid.

[25.0] The container of claim 24

[25.1] wherein, in the closed position, the at least one locating hole at least partially locates with at least one second surface portion to comprise the surface configuration.

CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. §42.24(d), Petitioner hereby certifies, in accordance with and reliance on the word count provided by the word-processing system used to prepare this Petition, that the number of words in this paper is 11,199. Pursuant to 37 C.F.R. §42.24(d), this word count excludes the table of contents, table of authorities, mandatory notices under §42.8, certificate of service, certificate of word count, appendix of exhibits, and any claim listing.

Dated: June 21, 2024

/Eugene Goryunov/
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CERTIFICATE OF SERVICE

The undersigned certifies that, in accordance with 37 C.F.R. §42.6(e) and 37 C.F.R. §42.105, service was made on Patent Owner as detailed below.

Date of service June 21, 2024

Manner of service FEDERAL EXPRESS

Documents served Petition for *Inter Partes* Review Under 35 U.S.C. §312 and 37 C.F.R. §42.104 of U.S. 10,287,070;
Petitioner's Exhibit List;
Exhibits 1001-1014, 1017, and 1020-1030.

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