The opinion in support of the decision being entered today is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MICHAEL H. PERONEK and KEVIN SWEENY

Appeal No. 2007-0020
Application No. 10/680,510
Technology Center 3700

Decided: July 24, 2007

Before TERRY J. OWENS and JENNIFER D. BAHR, and ANTON W. FETTING, *Administrative Patent Judges.*

TERRY J. OWENS, *Administrative Patent Judge.*

DECISION ON APPEAL

The Appellants appeal from a rejection of claims 28-42, 51-65, 74-76 and 79-84. Claims 43-50, 66-73, 77 and 78, which are all of the other pending claims, stand withdrawn from consideration by the Examiner.

THE INVENTION

The Appellants claim a molded plastic container comprising an anti-rotation neck flange having a plurality of substantially straight surfaces. Claim 28 is illustrative:

28. A molded plastic container comprising an upper mouth-forming portion, a lower base-forming portion and a substantially cylindrical sidewall portion extending between said upper mouth-forming portion and said lower base portion, said upper mouth-forming portion including a neck having at least one thread to secure a cap to said upper mouth forming portion and a non-circular anti-rotation flange to at least partially inhibit full rotation of said container as the cap is inserted on said container, said non-circular anti-rotation flange including an outer peripheral edge at least partially formed of a plurality of substantially straight surfaces totaling an odd number, said straight surfaces symmetrically oriented about said non-circular anti-rotation flange.

THE REFERENCES

Du Pree	US Des. 192,942	May 29, 1962
Tuchii (as translated)	JP 61-093093	May 12, 1985
Collette	US 4,755,404	Jul. 5, 1988
Nagata (as translated)	JP 06-247432	Sep. 6, 1994
Akiyama	US 6,752,284 B1	Jun. 22, 2004

THE REJECTIONS

The claims stand rejected as follows: claims 28-42, 52, 59, 74-76 and 79-84 under 35 U.S.C. § 112, second paragraph; claims 28-42, 51-65, 74-76 and 79-84 under 35 U.S.C. § 103 over Collette in view of Du Pree, JP ‘432 or Akiyama; claims 28-37, 42, 51-60, 65 and 74-76 under 35 U.S.C. § 103 over JP ‘093 in view of Du Pree or JP ‘432; and claims 38-41, 61-64 and 82-84 under 35 U.S.C. § 103

over JP '093 in view of Du Pree or JP '432, further in view of Collette or the Appellants' admitted prior art.[1]

OPINION

We reverse the rejection under 35 U.S.C. § 112, second paragraph, affirm the rejections under 35 U.S.C. § 103 involving JP '432, and affirm the other rejections under 35 U.S.C. § 103 as to some of the claims and reverse as to the other claims.

Rejection under 35 U.S.C. § 112, second paragraph

The Examiner argues that an odd number of flange straight surfaces and apexes cannot be symmetrically oriented, and that it is not clear about what line the straight surfaces and apexes are symmetrical (Answer 4, 7-8).

"Symmetrical" means "having, involving, or exhibiting symmetry", where "symmetry" means "the property of being symmetrical; *esp*: correspondence in size, shape, and relative position of parts on opposite sides of a dividing line or median plane or about a center or axis".[2] As shown in the Appellants' figures 6A, 6B, 8A and 8B, the Appellants' flange having an odd number of straight surfaces and apexes has an apex that is opposite to a straight surface. If a line is drawn through that apex perpendicular to the opposite straight surface, the halves of the opposite straight surface, the other straight surfaces, and the other apexes corresponds in size, shape and relative position about the line. Due to that correspondence, the straight surfaces and the apexes reasonably can be considered "symmetrically oriented" as that term is used by the Appellants. Thus, the

[1] Numerous other rejections are withdrawn in the Examiner's Answer (Answer 3).
[2] *Webster's New Collegiate Dictionary* 1181 (G. & C. Merriam 1973).

Examiner erred in rejecting the Appellants' claims under 35 U.S.C. § 112, second paragraph.

Rejection over Collette in view of Du Pree

Claims 28-35, 38-42, 74-76, 79 and 80

Collette discloses a molded polyester bottle having an upper mouth-forming portion, a lower base-forming portion and a substantially cylindrical sidewall portion (fig. 5) as required by the Appellants' claims. Collette's bottle has a neck flange (figs. 2, 5) but the shape of that flange is not disclosed.

Du Pree discloses a decanter having a flange with ten straight sides and apexes (figs. 1, 3).

The Appellants argue that because Du Pree does not disclose a neck having a substantially circular cross-section or at least one thread, it is not apparent why one of ordinary skill in the art would have combined Du Pree with Collette (Br. 18). Neck flanges are not mentioned in the "Background of the Invention" section of the Appellants' Specification. However, JP '093 (not applied in this rejection) indicates (p. 2) that capping-load support neck flanges were conventional in the art long before the Appellants' filing date.[3] It would have been readily apparent to one of ordinary skill in the art that Du Pree's neck flange shape on Collette's bottle would be effective for carrying out the desired gripping of the neck during capping.

The Appellants argue that Du Pree does not disclose a flange having an odd number of straight surfaces (Br. 19; Reply Br. 12-13). As pointed out by the Examiner (Answer 5, 8-9), the Appellants' claims require that the outer peripheral

[3] Because the JP '093 capping-load support flange is non-circular (fig. 2-B), the Appellants' argument that "the examiner's assertion that it is well known to use a

edge of the flange is at least partially formed of a plurality of substantially straight surfaces totaling an odd number. The Appellants state that the Examiner's point is unclear (Reply Br. 13-14). Why the Examiner's point would be considered unclear is not apparent. Du Pree's flange having ten straight surfaces (fig. 3) is partially formed of any 3, 5, 7 or 9 of the straight surfaces, any of which totals an odd number.

The Appellants argue that the Appellants' figures 6A and 6B indicate that "outer peripheral edge at least partially formed of a plurality of substantially straight surfaces totaling an odd number" means that the outer peripheral edge is at least partially formed of substantially straight surfaces, the total number of substantially straight surfaces on the outer peripheral edge being an odd number, and does not mean that the outer peripheral edge is at least partially formed of an odd number of substantially straight surfaces (Reply Br. 10-11). Both of the Appellants' figures 6A and 6B support the interpretation of "outer peripheral edge at least partially formed of a plurality of substantially straight surfaces totaling an odd number" as meaning that at least a portion of the substantially straight surfaces (any 3, 5 or 7 substantially straight surfaces in figures 6A and 6B) totals an odd number.

We therefore are not convinced of reversible error in the Examiner's rejection of claims 28-35, 38-42, 74-76, 79, 80 over Collette in view of Du Pree.

Claims 36, 37 and 81-84

The Appellants argue that Du Pree does not disclose a flange outer perimeter in the shape of a heptagon (Br. 20). The Examiner argues that it would have been

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non-circular flange during the filling and capping process of the container is also not supported by the art of record" (Reply Br. 8) is not well taken.

obvious to one of ordinary skill in the art to use a flange having an outer perimeter in the shape of a heptagon to provide the desired number of flange edges (Answer 5-6). The Examiner, however, has not provided evidence or reasoning as to why one of ordinary skill in the art would have desired a flange having seven edges. Thus, the Examiner has not established a prima facie case of obviousness over Collette and Du Pree of the inventions claimed in the Appellants' claims 36, 37, and 81-84.

Claims 51-65

The Appellants argue regarding claims 51 and 52-65 that depend directly or indirectly therefrom that Du Pree's ten-sided flange does not have an apex diametrically opposed from a center of at least one of the substantially straight sides (Br. 19-21). The Examiner argues that a polygonal shape having an odd number of straight sides inherently would have the corresponding number of apexes (Answer 6). The Examiner, however, has not established that one of ordinary skill in the art would have been led by Collette and Du Pree to use a flange having an odd number of straight sides. The Examiner, therefore, has not established a prima facie case of obviousness over Collette and Du Pree of the inventions claimed in the Appellants' claims 51-65.

Rejection over Collette in view of JP '432

Claims 28-35, 38-42, 74-76, 79 and 80

JP '432 discloses a molded plastic container having an upper mouth-forming portion, a lower base-forming portion and sidewalls that can be cylindrical (¶¶ 0009, 0026, fig. 1). The container has a neck flange that "is formed in hexagonal shape, but this flange part can be formed in a square or even octagonal

shape as long as it is in a shape with flat sides, it can be easily held by a machine in a factory and thus pouring and filling developing liquids can be achieved easily at a factory" (¶ 0021).

The Appellants argue that JP '432 does not disclose a flange having an odd number of straight edges (Br. 23; Reply Br. 12-13). That argument is not persuasive for the reason given above regarding the rejection over Collette in view of Du Pree, i.e., any 3 or 5 edges of the flange in JP 432's figure 1 total an odd number. Moreover, JP '432 discloses that the flange can have shapes other than orthogonal, such as square and octagonal, and that as long as the flange has flat sides it can be easily held by a machine in a factory and thus pouring and filling easily can be achieved (¶ 0021). Although each of the three shapes mentioned in JP '432 has an even number of sides, the disclosure that the flange can have shapes other than hexagonal as long as the shape has flat sides would have indicated to one of ordinary skill in the art that the flange can have not only an even number of sides but also the only other possibility, i.e., an odd number, provided that the sides are flat. *See KSR Int'l. Co. v. Teleflex Inc*., 127 S.Ct. 1727, 1742, 82 USPQ2d 1385, 1397 (2007)("When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp.").

For the above reasons we are not convinced of reversible error in the rejection of claims 28-35, 38-42, 74-76, 79 and 80 over Collette in view of JP '432.

Claims 36, 37, 59, 60 and 81-84

The Appellants argue that Collette and JP '432 do not disclose a flange having an outer perimeter in the shape of a heptagon (Br. 24). JP '432 discloses a

flange having one more side than a heptagon, i.e. an octagonal shaped flange (¶ 0021). As discussed above, JP '432 would have rendered obvious, to one of ordinary skill in the art, a flange having an odd number of sides. Accordingly, JP '432 would have led one of ordinary skill in the art to use a flange having seven sides instead of the eight disclosed in JP '423.

The Appellants argue that a flange such as those in the Appellants' figures 8C-8E having straight sides does not necessarily have apexes (Reply Br. 7). Flanges having the regular shape disclosed by JP '432, however, i.e., square, hexagonal and octagonal (¶0021) have apexes.

We therefore are not convinced of reversible error in the rejection of claims 36, 37, 59, 60 and 81-84 over Collette in view of JP '432.

Claims 51-58 and 61-65

The Appellants argue regarding claims 51 and 52-58 and 61-65 that depend directly or indirectly therefrom that JP '432's six-sided flange does not have an apex diametrically opposed from a center of at least one of the substantially straight sides (Br. 19-21). As discussed above, JP '432 would have rendered obvious to one of ordinary skill in the art a flange having an odd number of straight surfaces, i.e., heptagon, pentagon, etc. Such a flange necessarily would have an apex diametrically opposed from a center of at least one substantially straight surface.

We therefore are not convinced of reversible error in the rejection of claims 51-58 and 61-65 over Collette in view of JP '432.

Rejection over Collette in view of Akiyama

Akiyama discloses a molded plastic container having an upper mouth-forming portion, lower base-forming portion and substantially cylindrical sidewall portion (fig. 1) as required by the Appellants' claims. The container has a neck flange (holder ring 6) that may "be regularly hexagonal or octagonal like the holder ring **6**a shown in FIG. **33**" (col. 15, ll. 9-12).

Claims 28-35, 38-42, 74-76, 79 and 80

The Appellants' Brief does not include a discussion of the rejection over Collette in view of Akiyama. In the Reply Brief the Appellants' discuss together the rejections over Collette in view of secondary references Akiyama, Du Pree or JP '432.

The Appellants argue that none of Collette or the secondary references indicates that a problem with bottle rotation exists (Reply Br. 9). As indicated by JP '093 (p. 3), problems of bottle rotation and deformation or crushing during capping were known in the art.

The Appellants argue that there would be no motivation to modify the circular flange of Collette to prevent disengagement from a railing system during bottling (Reply Br. 9). References need not be combined for the purpose of solving the problem addressed by the Appellants. *See In re Kemps*, 97 F.3d 1427, 1430, 40 USPQ2d 1309, 1311 (Fed. Cir. 1996); *In re Beattie*, 974 F.2d 1309, 1312, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992); *In re Dillon*, 919 F.2d 688, 693, 16 USPQ2d 1897, 1901 (Fed. Cir. 1990) (en banc), *cert. denied*, 500 U.S. 904 (1991). As pointed out by the Appellants, "[t]he only problem with a circular flange is that such a circular flange cannot be easily secured at the edge to inhibit or prevent rotation of the bottle during the capping process" (Reply Br. 8-9). The reason for

using a flange having straight sides on Collette's bottle would have been to provide the needed improved gripping of the flange during the capping process.

The Appellants argue that the secondary references disclose flanges having an even number of sides, and the Appellants repeat their argument that a flange at least partially formed of a plurality of straight surfaces totaling an odd number cannot have an even number of straight surfaces (Reply Br. 9-11). Those arguments are not persuasive for the reasons given above regarding the rejections over Collette in view of Du Pree and JP '432.

We therefore are not convinced of reversible error in the rejection of claims 28-35, 38-42, 74-76, 79 and 80 over Collette in view of Akiyama.

Claims 36, 37, 51-65 and 81-84

The Examiner's arguments as to why Collette and Akiyama would have rendered obvious to one of ordinary skill in the art a flange having a heptagonal shape or an apex diametrically opposed from a center of a substantially straight surface are the same as those set forth with respect to the rejection over Collette in view of Du Pree (Answer 5-6) and are not persuasive for the reasons given above regarding that rejection. Hence, the Examiner has not established a prima facie case of obviousness over Collette in view of Akiyama of the inventions claimed in the Appellants' claims 36, 37, 51-65 and 81-84.

Rejections over JP '093 in view of Du Pree or JP '432

JP '093 discloses a molded plastic bottle with a capping-load support flange (9) having notches (13) around part of its perimeter to prevent rotation of the bottle during capping (p. 11; fig. 2-B).

The Appellants' arguments as to why it would not have been obvious to 1) substitute the flange shapes of Du Pree or JP '432 for that of JP '093, 2) use a hexagonal shaped flange, or 3) use a flange having an apex diametrically opposed from the center of a straight side are comparable to those discussed above with respect to the rejections over Collette in view of Du Pree or JP '432 (Br. 26-35; Reply Br. 12-15). We therefore incorporate regarding the rejections over JP '093 in view of Du Pree or JP '432 our reasoning and decisions set forth above with respect to the rejections over Collette in view of Du Pree or JP '423.

Rejection over JP '093 in view of Du Pree or JP '432, further in view of Collette or the Appellants' admitted prior art

The Appellants do not provide a substantive argument as to the separate patentability of dependent claims 38-41, 61-64 and 82-84 (Br. 35-36). Claims 38-41 and 61-64 therefore, stand or fall with the claims from which they depend. The claims from which claims 82-84 directly or indirectly depend, i.e., claims 74-76 and 79-81, are not rejected over JP '093 in view of Du Pree or JP '432, further in view of Collette or the Appellants' admitted prior art. The Appellants have not separately addressed the rejection of claims 82-84 over JP '093 in view of Du Pree or JP '432, further in view of Collette or the Appellants' admitted prior art and, therefore, have not convinced us of error in those rejections.[4]

DECISION

The rejection of claims 28-42, 52, 59, 74-76 and 79-84 under 35 U.S.C. § 112, second paragraph, is reversed. The rejections of claims 28-42,

[4] Claim 74, from which claims 82-84 ultimately depend, is similar to independent claim 28. As set forth above, the Appellants have not convinced us of reversible error in the rejection of claim 28 over JP '093 in view of Du Pree or JP '432, further in view of Collette or the Appellants' admitted prior art.

51-65, 74-76 and 79-84 under 35 U.S.C. § 103 over Collette in view of Du Pree or Akiyama are affirmed as to claims 28-35, 38-42, 74-76, 79 and 80, and reversed as to claims 36, 37, 51-65 and 81-84. The rejection of claims 28-42, 51-65, 74-76 and 79-84 under 35 U.S.C. § 103 over Collette in view JP '432 is affirmed. The rejection of claims 28-37, 42, 51-60, 65 and 74-76 under 35 U.S.C. § 103 over JP '093 in view of Du Pree is affirmed as to claims 28-35, 42 and 74-76, and reversed as to claims 36, 37, 51-60 and 65. The rejection of claims 28-37, 42, 51-60, 65 and 74-76 under 35 U.S.C. § 103 over JP '093 in view of JP '432 is affirmed. The rejection of claims 38-41, 61-64 and 82-84 under 35 U.S.C. § 103 over JP '093 in view of Du Pree, further in view of Collette or the Appellants' admitted prior art, is affirmed as to claims 38, 40 and 82-84, and reversed as to claims 39, 41 and 61-64. The rejection of claims 38-41, 61-64 and 82-84 under 35 U.S.C. § 103 over JP '093 in view of JP '432, further in view of Collette or the Appellants' admitted prior art, is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

JRG

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