

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* FRANK PAUL LEIGNER  
and CORY KLAIBER VAN LOOCKE

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Appeal 2007-2915  
Application 10/151,637<sup>1</sup>  
Technology Center 1700

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Decided: September 10, 2007

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*Before* ADRIENE LEPIANE HANLON, CAROL A. SPIEGEL,  
and MARK NAGUMO, *Administrative Patent Judges*.

SPIEGEL, *Administrative Patent Judge*.

DECISION

I. Introduction

This is a decision on appeal under 35 U.S.C. § 134 from the  
Examiner's final rejection of claims 17-22, all of the claims pending in the

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<sup>1</sup> Application filed 17 May 2002. The real party-in-interest is said to be Kraft Foods Holding, Inc. (Appeal Brief ("Appeal Br.") filed 10 October 2006, at 1).

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Application, under 35 U.S.C. § 103(a). We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

The claimed subject matter relates to a plastic container containing glycerol monostearate (“GMS”) at levels above about 4,000 ppm added only to its inner surface layer. Claim 17 is illustrative and reads:

A plastic container for containing a food product, said container comprising integral sidewalls and a bottom portion defining a compartment to contain the food product and having at least an interior layer for contacting the food product and an exterior layer, wherein the interior layer is about 0.01 to about 1 microns thick, and wherein only the interior layer comprises a plastic composition containing about 4000 to about 8000 ppm glycerol monostearate, whereby the food product can be released and removed from the compartment as an integral unit.

The Examiner has relied on the following references<sup>2</sup> as evidence of unpatentability:

Schwarz	US 5,017,436	May 21, 1991
Wilkie	US 6,022,612	Feb. 8, 2000

Schwarz and Wilkie qualify as prior art under 35 U.S.C. § 102(b). The Examiner has rejected claims 17-22 under 35 U.S.C. § 103(a) as obvious over the combined teachings of Schwarz and Wilkie.

Appellants have not argued the patentability of any of claims 17-22 separately. Therefore, we decide this appeal on the basis of claim 17. 37 C.F.R. § 41.37(c)(1)(v).

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<sup>2</sup> No references to *et al.* are made in this Decision.

II. Findings of Fact ("FF")

The following findings of fact and any set forth in the Discussion are supported by a preponderance of the evidence. To the extent any "finding of fact" is a conclusion of law, it should be so treated.

A. Appellants' Specification

- [1] Many food products are conveniently packaged in plastic containers (Specification at 1:12-13).
- [2] However, some foods, such as cream cheese, are said to “stick” to the plastic surfaces of the containers (Specification at 1:13-15).
- [3] According to the Specification, plastic containers containing more than about 4,000 ppm GMS in at least their inner surfaces have improved release characteristics (Specification at 1:3-10 and 2:12-23).
- [4] The GMS is said to act as a “release agent” to facilitate removal of food products from the container (Specification at 1:6-8 and 2:22-23).
- [5] For example, according to the Specification, “cream cheese can be dispensed in a single block form simply by flexing the plastic container by hand and/or light thumb pressure on the bottom of the plastic container” (Specification at 2:23-25).
- [6] The plastic container is preferably formed from polypropylene, polyethylene, polyester, polystyrene or mixtures thereof (Specification at 3:22-24).
- [7] If only an inner layer of the container, i.e., a food-contacting layer, contains GMS, the layer is generally about 0.01 to about 1 micron thick (Specification at 4:19-21).

B. Schwarz

- [8] Schwarz describes a composite plastic material useful in food container manufacturing comprising a polyolefin layer, such as an ethylene-polypropylene random copolymer layer, a styrene-ethylene-butylene-styrene (SEBS) layer, and a polystyrene layer (Schwarz at col. 1, ll. 18-20; col. 2, ll. 38-62; col. 3, ll. 24-31; and col. 4, ll. 1-5).
- [9] Schwarz adds GMS to the polyolefin, e.g., polypropylene copolymer, layer when it forms the inner layer of the container as an anti-static polymer to facilitate release of nested containers (Schwarz at col. 4, ll. 8-12).
- [10] Schwarz is silent regarding the amount of GMS added and the thickness of the inner olefin layer.

C. Wilkie

- [11] Wilkie describes a composite plastic film useful in food packaging comprising a core and a cold seal skin layer (Wilkie at col. 1, ll. 7-23 and col. 3, ll. 9-50).
- [12] According to Wilkie,  
the skin layer may be used for either or both of two purposes: as an exposed matte-finish surface layer which can readily be written on with a variety of printing inks; or as a cold seal receptive layer for anchoring a variety of cold seal cohesive compositions (Wilkie at col. 4, ll. 7-16).
- [13] The skin layer may be made of an ethylene-propylene random copolymer (Wilkie at col. 5, ll. 8-14).
- [14] If the skin layer is used as a matte-finish surface layer or as a cold seal receptive layer, it preferably has a thickness of about 2 to about 20

gauge (i.e., about 0.508 to about 5.08 microns) or of about 1 to about 20 gauge (i.e., about 0.254 to about 5.08 microns), respectively (Wilkie at col. 6, ll. 11-30).

[15] If the skin layer is used as a matte-finish cold seal release layer, it is required to contain a sufficient amount of a slip agent(s) to significantly decrease the friction of the layer and increase release properties (Wilkie at col. 4, ll. 32-36).

[16] Suitable slip agents include GMS, which may be present in amounts up to 10,000 ppm (Wilkie at col. 5, ll. 50-57).

#### D. The Rejection

[17] The Examiner found that Schwarz discloses a plastic food container comprising an ethylene-polypropylene random copolymer interior surface containing GMS and that this disclosure meets the claim limitation that only the interior layer of the container contains GMS (Answer<sup>3</sup> at 3).

[18] The Examiner found that Schwarz failed to disclose either the thickness of the interior ethylene-polypropylene random copolymer layer or the amount of GMS used (Answer at 3).

[19] The Examiner reasoned that one of ordinary skill in the art would have looked to teachings in the prior art of GMS-containing polypropylene packaging materials known to be useful in food packaging to construct Schwarz's multilayered container (Answer at 4).

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<sup>3</sup> Examiner's Answer ("Answer") mailed 26 February 2007.

- [20] The Examiner found that Wilkie discloses packaging films comprising an ethylene-polypropylene random copolymer containing 0 to 10,000 ppm GMS with a thickness of 2 to 20 gauge (Answer at 3).
- [21] The Examiner further found that “Wilkie specifically states that the film disclosed therein is useful as a surface layer in multilayer packaging systems” (Answer at 4).
- [22] The Examiner concluded that it would have been obvious to use Wilkie’s film to produce Schwarz’s multilayered container with a GMS concentration on the inside surface only, as instantly claimed (Answer at 4).
- [23] The Examiner found that the Schwarz/Wilkie container meets the structural limitations of the container of claim 17 and thus the Schwarz/Wilkie container “if holding a food product, would also provide for that food product to be easily released and removed from the container” absent evidence or arguments to the contrary (Answer at 4).

E. Appellants’ Counterarguments

- [24] Appellants contend that while Schwarz might suggest that GMS helps to release nested plastic containers, Schwarz does not teach or suggest that GMS helps to release food products (Appeal Br. at 8; Reply Br.<sup>4</sup> at 4 and 7).
- [25] Appellants further contend that Schwarz does not specify that GMS should only be incorporated into an interior layer and that Wilkie describes embodiments wherein slip agents, e.g., GMS, should not be added to the inner layers of a film (Appeal Br. at 9; Reply Br. at 4-5).

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<sup>4</sup> Reply Brief (“Reply Br.”) filed 19 February 2007.

[26] Finally, Appellants contend that the Examiner has engaged in hindsight reconstruction of the claimed invention because he has not identified what reference or knowledge basis supports his conclusion that a container meeting the structural limitations of the container of claim 17 “would have been expected” to allow for easy release and removal of a food from the container absent evidence or arguments to the contrary (Reply Br. at 7).

### III. Obviousness

A claimed invention is not patentable if its subject matter would have been obvious to a person of ordinary skill in the art. 35 U.S.C. § 103(a); *KSR Int'l Co. v. Teleflex, Inc.*, 127 S.Ct. 1727, 82 USPQ2d 1385 (2007); *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966). Facts relevant to a determination of obviousness include (1) the scope and content of the prior art, (2) any differences between the claimed invention and the prior art, (3) the level of ordinary skill in the prior art, and (4) relative objective evidence of obviousness or non-obviousness. *KSR*, 127 S.Ct. at 1734, 82 USPQ2d at 1389; *Graham*, 383 U.S. at 17-18. A person of ordinary skill in the art uses known elements and process steps for their intended purpose. *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 90 S.Ct. 305 (1969); *Sakraida v. AG Pro, Inc.*, 425 U.S. 273, 282, 96 S.Ct. 1532 (1976); *Dunbar v. Myers*, 4 Otto (94 U.S.) 187, 195 (1876). Furthermore, to render an invention obvious, the prior art does not have to address the same problem addressed by a patent applicant. *KSR*, 127 S.Ct. at 1741-42; *In re Dillon*, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1990) (en banc); *In re Kemps*, 97 F.3d 1427, 1430, 40 USPQ2d 1309, 1311 (Fed. Cir. 1996).

Claim 17 is directed to a product, specifically to a plastic container comprising, in relevant part, an interior layer about 0.01 to about 1 micron thick “wherein only the interior layer comprises a plastic composition containing about 4000 to about 8000 ppm glycerol monostearate.”

Schwarz describes a plastic container comprising an inner layer of polyolefin, e.g., an ethylene-polypropylene random copolymer layer, which contains GMS added to facilitate release of nested containers (FFs 8-9). Wilkie discloses that ethylene-polypropylene random copolymer skin layers of composite plastic films useful in food packaging preferably have thicknesses of about 0.254/0.508 to about 5.08 microns (FF 14). Wilkie further discloses that if the skin layer is used as matter-finish cold seal release layer, it is *required* to contain a sufficient amount of a slip agent, e.g., GMS which may be present in amounts up to 10,000 ppm, to significantly decrease the friction of the layer and increase its release properties (FF 15).

The Examiner reasoned that since Schwarz did not specify the thickness of the inner ethylene-polypropylene random copolymer layer or the amount of GMS therein, a skilled artisan would look to other prior art food packaging plastic composite films comprising GMS-containing ethylene-polypropylene random copolymer layers to determine how thick to make Schwarz’s inner ethylene-polypropylene random copolymer layer and how much GMS to incorporate therein (FFs 18-21). The Examiner also noted that preventing sticking of one container to another container suggests a generally nonstick surface, i.e., the inner surface of the container (Answer at 6). Thus, the Examiner concluded that if providing a plastic container with a generally nonstick inner GMS-containing-ethylene-polypropylene

random copolymer inner surface layer facilitated release and/or removal of one object (a nested container) stuck inside the plastic container, it would have been expected that the use of the same generally nonstick inner GMS-containing-ethylene-polypropylene random copolymer inner surface layer to facilitate release and/or removal of another object (a food product) stuck inside the plastic container would be successful (Answer at 5). *See e.g., KSR* 127 S.Ct. at 1740, 82 USPQ2d at 1396 (“if a technique has been used to improve one device, a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill”). “A person of ordinary skill in the art is also a person of ordinary creativity, not an automaton.” *Id.* 127 S.Ct. at 1742, 82 USPQ2d at 1397. Finally, as additional motivation for combining the teachings of Schwarz and Wilkie, the Examiner noted that the Wilkie’s film is said to have good machineability and stiffness, among other advantages (Answer at 6).

It is well settled that optimization of a result effective variable, in this case, the amount of release agent used or thickness of a layer, is within ordinary skill. *In re Peterson*, 315 F.3d 1325, 1330, 65 USPQ2d 1379, 1382-83 (Fed. Cir. 2003) (determining where in a disclosed set of percentage ranges the optimum combination of percentages lies is *prima facie* obvious). Wilkie teaches the general thicknesses of GMS-containing-ethylene-polypropylene random copolymer inner surface layer and the general amounts of GMS to be incorporated therein, i.e., a sufficient amount of GMS to significantly decrease the friction of the layer and increase its release properties (FFs 14-16). Appellants have not pointed to any evidence of record that might establish that using Wilkie’s film as the polyolefin layer

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of the plastic composite in Schwarz's container was beyond the routine skill in the art or that incorporation of GMS at concentrations between about 4,000 to about 8,000 ppm provided unexpected results.

Therefore, we hold that the Examiner has provided a sufficient factual basis to support a reasonable conclusion of obviousness based on the combined disclosures of Schwarz and Wilkie and Appellants' counterarguments are unpersuasive of reversible Examiner error, especially in the absence of any evidence of secondary considerations, e.g., unexpected results or activity beyond the ordinary skill in the art.

Based on the foregoing, we affirm the rejection of claims 17-22 under § 103(a) as obvious over the combined teachings of Schwarz and Wilkie.

#### IV. Conclusion

In view of the foregoing and for the reasons given, it is

ORDERED that the Examiner's rejection of claims 17-22 under 35 U.S.C. § 103(a) as unpatentable over the combined teachings of Schwarz and Wilkie 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

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