

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today
(1) was not written for publication in a law journal and
(2) is not binding precedent of the Board.

Paper No. 13

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RICHARD P. MACAULEY, LEWIS H. SITA
and ELWOOD L. STOKESBURY

Appeal No. 97-0816
Application 08/204,715¹

ON BRIEF

Before McQUADE, FLEMING, and CRAWFORD, Administrative Patent
Judges.

McQUADE, Administrative Patent Judge.

¹ Application for patent filed March 2, 1994.

Appeal No. 97-0816
Application 08/204,715

DECISION ON APPEAL

This appeal is from the final rejection of claims 1, 2 and 8, all of the claims pending in the application.

The invention relates to a "light excluding multilayer plastic container for use with light sensitive low acid liquid nutritional products" (specification, page 1). Claim 1 is illustrative and reads as follows:

1. A plastic container for a light sensitive nutritional product, comprising a multilayer plastic container, said container comprising a wall having six layers which comprise from the exterior of the container to the interior of the container: (a) a layer of food grade polypropylene; (b) a layer of high temperature adhesive; (c) a layer comprising an oxygen barrier of ethyl-vinyl-alcohol; (d) a layer of a high temperature adhesive; (e) a layer of regrind material; and (f) a layer of food-grade polypropylene; and wherein said polypropylene and regrind layers contain at least about 5% by weight and about 1% by weight respectively but not more than about 8% by weight of titanium dioxide, said titanium dioxide serving to reduce the extent of light transmission through said wall by at least about 99.5%.

The references relied upon by the examiner as evidence of obviousness are:

Kirshenbaum et al. (Kirshenbaum)	4,051,265	Sept. 27, 1977
Baird et al. (Baird)	4,846,359	July 11, 1989
Yum et al. (Yum)	5,104,390	Apr. 14, 1992
Arvidson et al. (Arvidson)	5,123,554	June 23, 1992

Claims 1, 2 and 8 stand rejected under 35 U.S.C. § 103 as being unpatentable over Arvidson in view of Baird, Yum and Kirshenbaum.

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Arvidson discloses a "multi-layer co-extrusion blow molded plastic container adapted to be filled with a heat-sensitive nutrient and then retorted at relatively high temperatures to sterilize the contents thereof" (Abstract). The multi-layered wall structure of the container

is characterized by inner and outer layers 34 and 36 both of which are of a food-grade polypropylene having a minimum thickness of 0.002 inches, a regrind layer 38 adjacent the outer layer 36, a pair of high temperature adhesive layers 40 and 42, such as 0.0015 inch polyolephin [sic, polyolefin] disposed adjacent the regrind layer 38 and the inner layer 34, respectively, and, between the two high temperature adhesive layers 40 and 42, an oxygen barrier layer 44 of ethyl-vinyl-alcohol (EVOH) having a thickness of from 0.0015 to 0.002 inches [column 3, lines 8 through 18].

Baird discloses a "multi-layered, handled plastic bottle that substantially resists the absorption and oxidation of essential oils, flavoring components, and nutritional components . . . found in various beverages such as fruit juices and particularly citrus juices" (Abstract). Baird teaches that the outer appearance of the bottle can be enhanced by including opacifying pigments, such as carbon black, titanium dioxide (TiO_2) or a ferrous oxide, in the outer layer of the bottle (see column 4, line 65 through column 5, line 3).

Yum discloses a urinary drainage bag formed of two plastic films heat-sealed to one another about their peripheries. The

films may be transparent or translucent for exposing the contents of the bag, or may be made opaque by the addition of TiO_2 (see column 5, lines 1 through 11).

Kirshenbaum discloses "a container for the storage, at or near ambient conditions, of liquid foods subject to spoilage due to the action of light waves, oxygen and other gaseous species" (column 1, lines 9 through 12). The container consists of a blow moldable thermoplastic body 12 which is opaque to light having a wavelength in the range of between about 3500 and 5500 Angstroms and a surrounding overwrap film 14 which prevents the diffusion of oxygen and other gaseous species through the container. With regard to the opaque characteristic of the body 12, Kirshenbaum teaches that

it is preferred to employ a pigment which serves this purpose . . . Of the additives that may be employed as a pigment to provide opaqueness, the most preferred is titanium dioxide. Titanium dioxide not only makes an otherwise clear thermoplastic opaque, but, in addition, it has the additional advantage of pigmenting the thermoplastic white. In view of the fact that milk represents the most important liquid food application for the container 10 of this invention, a white container is deemed aesthetically the most attractive.

While it has been found that a pigment concentration of at least 0.5 percent by weight, based on the total weight of the frame, that is, the total weight of the thermoplastic and the pigment, is necessary it is preferred that a somewhat greater concentration of pigment be employed. In the case where titanium dioxide is employed as a pigment it is

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preferred that the concentration of the titanium dioxide be in the range of between about 1 and 4 percent by weight of the total weight of the frame [column 5, line 53 through column 6, line 5].

The examiner explains the rejection on appeal as follows:

Arvidson discloses applicants['] claimed bottle structure. There is not disclosed the incorporation of TiO₂ [sic] for the purpose of reducing light transmission through the wall. The secondary references all address this problem by the incorporation of TiO₂. Baird col. 5, line[s] 1-5, (opacifying pigments), Yum et al, col. 5, line 10 and Kirshenbaum et al, col. 5, lines 55-60. It is the position of the Examiner that it would have been obvious to one having ordinary skill in the art to incorporate TiO₂ into any layer of Arvidson et al for to reduce light transmission. Applicants['] claimed amount of TiO₂ would have been obvious to one having ordinary skill in the art without undue experimentation as the claimed amounts are reasonable quantities that would have expected results [answer, Paper No. 12, pages 3 and 4].

The appellants, on the other hand, contend that the examiner's conclusion of obviousness is unsound because "none of the foregoing references suggests the addition of titanium dioxide to more than one layer of a container body. In addition, none of the references suggests a titanium dioxide level of at least 5% by weight in at least two layers of a multi-layered body" (brief, Paper No. 10, page 7).

The test for obviousness is what the combined teachings of the references would have suggested to those of ordinary skill in the art. In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881

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(CCPA 1981).

As acknowledged by the examiner, the container disclosed by Arvidson does not meet the limitations in claim 1 requiring that "said polypropylene and regrind layers contain at least about 5% by weight and about 1% by weight respectively but no more than about 8% by weight of titanium dioxide, said titanium dioxide serving to reduce the extent of light transmission through said wall by at least about 99.5%." In this regard, Arvidson does not disclose the presence of titanium dioxide in any of the container wall layers. The examiner's reliance on Baird, Yum and Kirshenbaum to cure this deficiency in Arvidson is not well taken.

Arguably, the combined teachings of the applied references would have suggested the addition of titanium dioxide to one of the layers of Arvidson's container wall to attain a degree of opacity for the sake of: (1) enhancing the appearance of the container as in Baird; (2) shielding the contents of the container from view as in Yum; and/or (3) preventing spoilage of the contents from light waves as in Kirshenbaum. There is nothing in the combined teachings of these references, however, which would have suggested the addition of titanium dioxide to Arvidson's container wall so as to meet the rather specific

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multiple layer, percentage and light transmission limitations set forth in claim 1. Rejections based on 35 U.S.C. § 103 must rest on a factual basis. In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 177-78 (CCPA 1967). In making such a rejection, the examiner has the initial duty of supplying the requisite factual basis and may not, because of doubts that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in the factual basis. Id. In the present case, it is apparent that the examiner has resorted to hindsight reconstruction to supply the above noted deficiencies in the Arvidson container vis-à-vis the container recited in claim 1.

Accordingly, we shall not sustain the standing 35 U.S.C. § 103 rejection of claim 1, or of claims 2 and 8 which depend therefrom, as being unpatentable over Arvidson in view of Baird, Yum and Kirshenbaum.

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The decision of the examiner is reversed.

REVERSED

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JOHN P. McQUADE)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
MICHAEL R. FLEMING)	
Administrative Patent Judge)	APPEALS AND
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)	INTERFERENCES
)	
MURRIEL E. CRAWFORD)	
Administrative Patent Judge)	

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