

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 34

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STEVEN B. DUNN
and
TOR PETERSON

Appeal No. 2004-1304
Application 08/730,625

ON BRIEF

Before COHEN, ABRAMS, and FRANKFORT, Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's rejection of claims 1 through 28, all of the claims pending in this application.

Appeal No. 2004-1304
Application 08/730,625

Appellants' invention relates to an improved utensil for feeding a small child and to a kit for feeding infants and small children which includes a plurality of such utensils. More specifically, the invention is directed to a utensil that is protective of a small child's sensitive mouth and is designed and constructed to convey to a child or caregiver, without the possibility of confusion, when food on the utensil is too hot to be comfortably and safely consumed by an infant or small child. Independent claims 1, 9, 27 and 28 are representative of the subject matter on appeal, and a copy of those claims, as reproduced from the Appendix to appellants' brief, is attached to this decision.

The prior art references of record relied upon by the examiner in rejecting claims before us on appeal are:

Biolik	3,695,110	Oct. 3, 1972
McNaughtan	4,070,912	Jan. 31, 1978
Heinmets et al. (Heinmets)	4,156,365	May 29, 1979

Packaging for "Too Hot" Color-Changing Safety Spoons by WeeCare, hereinafter "Too Hot" package

"Soft Bite Utensils" (Appellants' admitted prior art set forth on page 1 of the specification)

Appeal No. 2004-1304
Application 08/730,625

Claims 1 through 28 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which appellants regard as their invention.

Claims 1, 2, 6 and 27 stand rejected under 35 U.S.C. § 102(b) as being anticipated by McNaughtan.

Claims 25 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McNaughtan in view of Biolik.

Claims 1 through 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over "Soft Bite Utensils" in view of the "Too Hot" package and Heinmets.

Claims 25 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over "Soft Bite Utensils" in view of the "Too Hot" package and Heinmets as applied to claim 1 above, and further in view of Biolik.

Appeal No. 2004-1304
Application 08/730,625

Claims 1 through 8, 25 and 26 also stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the "Too Hot" package in view of "Soft Bite Utensils."

Rather than reiterate the conflicting viewpoints advanced by the examiner and appellants regarding the above-noted rejections, we refer to the Office action mailed November 19, 2002 (Paper No. 28) and the answer (Paper No. 32, mailed September 5, 2003) for a full exposition of the examiner's position, and to appellants' brief (Paper No. 29, filed May 21, 2003) for the arguments thereagainst.

OPINION

Having carefully reviewed the indefiniteness, anticipation and obviousness issues raised in this appeal in light of the record before us, we have made the determinations which follow.

Looking first to the examiner's rejection of claims 1 through 28 under 35 U.S.C. § 112, second paragraph, we note that

Appeal No. 2004-1304
Application 08/730,625

the examiner urges in the rejection (Paper No. 28) that 1) the use of "such as" in claims 1, 9, 27 and 28 on appeal is vague and indefinite; 2) the recitation of "said materials" in claim 9, line 3, lacks antecedent basis; and 3) the recitation of "said soft plastic material" in claim 23, line 2, has no proper antecedent basis. With regard to the first issue, appellants contend on page 7 of the brief that there is no real uncertainty as to the scope of the claims on appeal as a result of the inclusion of "such as," since that terminology is being used not to provide an example of a claimed structure or process, but to provide a descriptive example of the intended use of the structure recited. We agree.

As for the examiner's questions regarding the noted recitations in claims 9 and 23 lacking proper antecedent basis, appellants indicate no real disagreement with the examiner's position, but also urge that each of the questioned recitations is "not felt to render the respective claims indefinite to the extent that it would be inoperative under § 112, second paragraph" (brief, page 7). Appellants go on to contend that the

Appeal No. 2004-1304
Application 08/730,625

meaning of the claims is expressed with a reasonable degree of clarity and particularity. In this instance, we do not agree with appellants, and find that the recitations pointed to by the examiner in claims 9 and 23 as lacking antecedent basis are such as to render those claims indefinite, since the metes and bounds of the claims cannot be reasonably ascertained.

In light of the foregoing, the examiner's rejection of claims 9 through 24 under 35 U.S.C. § 112, second paragraph, will be sustained, but that of claims 1 through 8 and 25 through 28 will not be sustained.

Turning next to the examiner's rejection of claims 1, 2, 6 and 27 under 35 U.S.C. § 102(b) as being anticipated by McNaughtan, we note that McNaughtan teaches or suggests a temperature indicating device such as a spoon usable for feeding or administering a medication to a patient wherein the feeding end of the utensil may comprise a rigid base portion that is made of metal (col. 5, lines 24-33) and a plastic thermochromic coating provided over the rigid base portion, which coating is,

at least in part, formulated to change color when exposed to a substance, such as food, that is above a predetermined temperature that is appropriate for comfortable and safe consumption by an infant or small child (col. 8, lines 49-53 and col. 8, lines 58-63). As is apparent from the disclosure of McNaughtan (e.g., col. 4, lines 32-53), the plastic thermochromic coating is multi-layered and includes a polymeric cholesteric temperature indicating composition applied directly to the rigid base portion or substrate, a preferred protective coating of polyvinyl alcohol (col. 4, lines 54-56) applied over the temperature indicating composition and an outer water insoluble protective layer formed of, e.g., polyvinyl chloride (col. 5, lines 1-7). While McNaughtan does not specifically discuss the relative hardness or softness of the thermochromic plastic coating, we note column 2, lines 44-48, wherein it is indicated that the temperature indicating device therein should be made of unbreakable and pliable material such that the device will not injure a patient even if pressure is applied against the device by the patient. Moreover, we also make note of the examiner's position (answer, page 5) that the thermochromic plastic coating of McNaughtan is

"relatively soft" when compared to typical metals, such as stainless steel, used in the making of food serving and eating utensils.

With regard to independent claim 1 on appeal, appellants argue on pages 9-12 of the brief that it is preferred in McNaughtan that the spoon would be a plastic spoon in which plastic serves as the substrate, and that the mention of a "metal" substrate in column 5, lines 30-33, of that patent refers to and describes only possibilities of the invention in general. While it is true that McNaughtan discloses that for use in an oral thermometer the substrate "can be a plastic spoon which would permit the administration of medicine simultaneously with taking of the patient's temperature" (col. 5, lines 30-33), it is our view that the disclosure of this patent as a whole and, in particular, the disclosure at column 8, lines 49-53, and column 5, lines 24-37, would collectively teach an embodiment of the temperature indicating device therein in the form of a spoon formed with a rigid base portion made of metal and a plastic thermochromic coating provided over the rigid base portion, which

Appeal No. 2004-1304
Application 08/730,625

coating is, at least in part, formulated to change color when exposed to a substance, such as food, that is above a predetermined temperature that is safe and appropriate for comfortable consumption by an infant or small child.

With regard to appellants' further arguments on page 12 of the brief that claim 1 on appeal makes it clear that the material that changes color is the same plastic material that is described therein as being relatively soft and non-water absorbing, while in *McNaughtan*, the cholesterol compound which changes color is neither soft nor non-water absorbing, we observe that claim 1 on appeal defines a utensil for feeding a small child wherein the feeding end of the utensil comprises a rigid base portion and "a coating of a relatively soft non-water absorbing plastic material provided over said rigid base portion, said relatively soft plastic material being formulated to change color when exposed to a substance, such as food, that is above a predetermined temperature that is appropriate for the comfortable consumption of food for a small child." Contrary to appellants' apparent belief, claim 1 does not limit the feeding end of the

utensil to having a coating formed as a single layer of plastic material having the recited properties.

As we noted supra, the plastic thermochromic coating in McNaughtan is multi-layered, and includes a polymeric cholesteric temperature indicating (color change) composition applied directly to the rigid base portion or substrate, a first protective coating of polyvinyl alcohol (col. 4, lines 54-56) applied over the cholesteric temperature indicating composition and an outer water insoluble protective layer formed of, e.g., polyvinyl chloride (col. 5, lines 1-7). In considering the teachings of McNaughtan, it is the entirety of the coating in McNaughtan that the examiner equates to the "coating" recited in claim 1 on appeal. Thus, the multi-layer coating in McNaughtan is clearly "non-water absorbing" as a result of the outer water insoluble protective layer formed of, e.g., polyvinyl chloride. With respect to the "relatively soft" limitation of claim 1, while McNaughtan does not specifically discuss the relative softness/hardness of the plastic coating therein, we again point to column 2, lines 44-48, wherein it is indicated that the

Appeal No. 2004-1304
Application 08/730,625

temperature indicating device therein should be made of unbreakable and pliable material such that the device will not injure a patient even if pressure is applied against the device by the patient. Moreover, we again make note of the examiner's position (answer, page 5) that the plastic coating of McNaughtan is "relatively soft" when compared to typical metals, such as stainless steel, used in the making of food serving and eating utensils, and further observe that appellants have provided no cogent argument specifically addressing this aspect of the examiner's position.

Since, in our view, McNaughtan reasonably teaches a utensil like that broadly set forth in claims 1 and 2 on appeal, the examiner's rejection of those claims under 35 U.S.C. § 102(b) will be sustained.

Claim 6 on appeal depends from claim 1 and specifies that in the utensil of claim 1 the relatively soft plastic material "comprises polyvinyl chloride and a thermochromatic

[sic, thermochromic]¹ additive." Again looking at the coating of a relatively soft non-water absorbing plastic material in McNaughtan as a whole, we must agree with the examiner, since the plastic coating therein comprises both a thermochromatic additive as part of the polymeric color change layer and polyvinyl chloride as the outer non-water absorbing protective layer. Thus, the rejection of claim 6 under 35 U.S.C. § 102(b) based on McNaughtan will also be sustained.

As for the examiner's rejection of claim 27 under 35 U.S.C. § 102(b) based on McNaughtan, we note that claim 27 is somewhat different in scope than claim 1 discussed above. Claim 27 defines an article for use in feeding a person, wherein the article comprises a body, and

a food contacting surface on said body, said food contacting surface being of a first initial color, said food contacting surface being constructed and arranged to lose its color and turn white when exposed to a substance, such as food, that is above a predetermined temperature that is appropriate for the comfortable consumption of food for a small child, the white colorless state

¹ Paper No. 28, page 2, states that in claim 6 "thermochromatic" should read "thermochromic" and that appropriate correction is required.

thereby acting as a uniform warning state that is recognizable by a user as such regardless of the initial color of the article.

Like appellants (brief, pages 13-14), we note that there is no teaching or suggestion in McNaughtan of a food contacting surface of the utensil therein that changes color or, more specifically, turns white when exposed to a substance, such as food, that is above a predetermined temperature that is appropriate for comfortable consumption by a small child, as required in claim 27 on appeal. For that reason, we will not sustain the examiner's rejection of claim 27 under 35 U.S.C. § 102(b).

The examiner has rejected dependent claims 25 and 26 under 35 U.S.C. § 103(a) based on McNaughtan in view of Biolik, contending that it would have been obvious to one of ordinary skill in the art to have modified the utensil of McNaughtan (as applied to claim 1 above) to have the plastic coating therein extend over the entire spoon for easy manufacture and esthetic purposes, as taught by Biolik (col. 3, lines 61-63). While it is true that Biolik discloses a temperature measuring spoon having a

Appeal No. 2004-1304
Application 08/730,625

temperature measuring device incorporated therein, and discloses that the spoon itself "may be constructed of metal and covered with a layer of plastic" (col. 3, lines 61-63), absent hindsight, we see no basis in such a broad teaching of a plastic coated spoon for modifying the particular utensil disclosed in McNaughtan in the manner urged by the examiner so as to result in an area on the handle of the utensil that is color coded to match the color of the plastic material on the feeding end for comparison purposes (claim 25), or to result in an arrangement wherein said area on the handle is thermochromic, so that a caregiver can test the temperature of food without dipping the feeding end of the utensil into the food (claim 26). Thus, we will not sustain the examiner's rejection of claims 25 and 26 under 35 U.S.C. § 103(a).

The next rejection for our review is that of claims 1 through 8 under 35 U.S.C. § 103(a) as being unpatentable over "Soft Bite Utensils" in view of the "Too Hot" package and Heinmets. In this instance, the examiner has determined (Paper No. 28, pages 8-9) that the "Soft Bite Utensils" described on page 1 of the present specification teach the claimed invention

except that the soft plastic material coated on the metal substrate at the feeding end of such utensils is not indicated as changing color when it contacts hot food. To account for this difference, the examiner points to the "Too Hot" package for Color-Changing Safety Spoons noting the disclosure thereon that the spoons include an ergonomically molded handle and a food holding portion of "Soft Plastic for Teeth and Gums" and the further indication thereon that the safety spoons will change color (e.g., blue to hot pink) indicating that the food contained therein is too hot (e.g., 105° F or above) to be safely consumed by an infant or small child. From the combined teachings of the applied prior art, the examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of appellants' invention to modify the "Soft Bite Utensils" by formulating the soft plastic material of the feeding end thereof with a thermochromic additive to facilitate a color change when the utensil (e.g., a spoon) contacts hot food in order to warn a user or caregiver that the food is too hot to safely consume, as is taught by the "Too Hot" package. The examiner has further determined that Heinmets discloses that it is well known in the art to coat a metal spoon with a thermochromic plastic layer that

changes color when the spoon contacts hot food, and is of the view that this disclosure also provides an additional teaching for modifying the "Soft Bite Utensils" in the manner noted above.

We agree with the examiner that the combined teachings of "Soft Bite Utensils," the "Too Hot" package and Heinmets would have rendered the subject matter defined in claims 1 through 5, 7 and 8 on appeal obvious to one of ordinary skill in the art at the time of appellants' invention. Given the express notation on the "Too Hot" package that the safety spoons therein are made of "Soft Plastic for Teeth and Gums," we find appellants' argument that the safety spoons are made of "hard" plastic material and thus would not have been suggestive of the claimed subject matter even if combined with the "Soft Bite Utensils" (brief, pages 34-36), to be unpersuasive. As for Heinmets, while the temperature range of 60-70° C specified therein is above that taught on the "Too Hot" package (i.e., 105° F), we nonetheless agree that this patent does teach that it was known in the art to coat a metal spoon with a thermochromic plastic layer that changes color when the spoon contacts hot food (col. 1, lines 37-47), and therefore provides an additional teaching or

suggestion for modifying the above-noted metal based "Soft Bite Utensils" in the manner posited by the examiner.

In sustaining the rejection of independent claim 1, we also note that, contrary to appellants' contentions (brief, page 34), the examiner has not determined that the ordinarily skilled artisan would have "removed and completely replaced" the soft plastic coating on the "Soft Bite Utensils" with a coating like that mentioned on the "Too Hot" package. Instead, the examiner has merely concluded that it would have been obvious to one of ordinary skill in the art at the time of appellants' invention to modify the "Soft Bite Utensils" by formulating the soft plastic material of the feeding end thereof with a thermochromic additive to facilitate a color change in the soft plastic coating when the utensil (e.g., spoon) contacts hot food in order to warn a user or caregiver that the food is too hot to safely consume, as is taught or suggested by the "Too Hot" package. Moreover, even if appellants' assertion of complete replacement of the plastic layer were correct with regard to this combination, we again point to the express notation on the "Too Hot" package that the safety spoons therein are made of "Soft

Appeal No. 2004-1304
Application 08/730,625

Plastic for Teeth and Gums," and conclude that such a plastic coating used on the "Soft Bite Utensils" would at least be viewed as being "relatively soft" and non-water absorbing, as required in claim 1 on appeal.

As for dependent claims 2 through 8, and appellants' arguments on pages 35-36 of the brief, we agree with the examiner's position set forth on pages 7-8 of the answer concerning claims 2 through 5, 7 and 8, but agree with appellants that the "Soft Bite Utensils," the "Too Hot" package and Heinmets applied by the examiner do not teach or suggest use of a soft plastic coating which comprises "polyvinyl chloride and a thermochromic additive."² Although we view the soft plastic material of the "Soft Bite Utensils" as generally having a hardness in appellants' claimed range, we recognize that the prior art applied by the examiner is silent concerning any specific composition of the soft plastic material. Thus, we will

² In claim 7, line 1, "said son plastic" should apparently be --- said soft plastic ---.

Appeal No. 2004-1304
Application 08/730,625

sustain the examiner's above-noted rejection of claims 2 through 5, 7 and 8 under 35 U.S.C. § 103(a), but not that of claim 6.

With regard to the examiner's rejection of claims 25 and 26 under 35 U.S.C. § 103(a) as being unpatentable over "Soft Bite Utensils" in view of the "Too Hot" package and Heinmets as applied to claim 1 above, and further in view of Biolik, we share appellants' view as set forth on pages 37-38 of the brief. While it is true that Biolik discloses a temperature measuring spoon having a temperature measuring device incorporated therein, and discloses that the spoon itself "may be constructed of metal and covered with a layer of plastic" (col. 3, lines 61-63), absent hindsight, we see no basis in such broad teaching for modifying the spoon or utensil disclosed in "Soft Bite Utensils" as modified by the "Too Hot" package and Heinmets in the particular manner urged by the examiner so as to result in an area on the handle of the utensil that is color coded to match the color of the soft plastic material on the feeding end for comparison purposes (claim 25), or to result in an arrangement wherein said area on the handle is thermochromic, so that a caregiver can test

Appeal No. 2004-1304
Application 08/730,625

the temperature of food without dipping the feeding end of the utensil into the food (claim 26). Thus, we will not sustain the examiner's rejection of claims 25 and 26 under 35 U.S.C. § 103(a) based on "Soft Bite Utensils," the "Too Hot" package, Heinmets and Biolik.

The last of the examiner's rejections for our review is that of claims 1 through 8, 25 and 26 under 35 U.S.C. § 103(a) as being unpatentable over the "Too Hot" package in view of "Soft Bite Utensils." The examiner's position regarding this rejection is set forth on pages 10-11 of Paper No. 28. For essentially the same reasons as set forth in connection with the two § 103 rejections discussed immediately above concerning these same claims, we will sustain the examiner's rejection of claims 1 through 5, 7 and 8, but not that of claims 6, 25 and 26. Like the examiner, it is our view that the collective teachings of the "Too Hot" package and "Soft Bite Utensils" would have rendered the subject matter defined in claims 1 through 5, 7 and 8 on appeal obvious to one of ordinary skill in the art at the time of appellants' invention, and thus resulted in a combination of

Appeal No. 2004-1304
Application 08/730,625

the noted benefits of each of the two types of utensils reflected in the applied prior art into a single utensil. Given the express notation on the "Too Hot" package that the safety spoons therein are made of "Soft Plastic for Teeth and Gums," we find appellants' argument that the safety spoons are made of "hard" plastic material and thus would not have been suggestive of the claimed subject matter even if combined with the "Soft Bite Utensils" (brief, pages 40-41), to be unpersuasive. However, we agree with appellants that the "Soft Bite Utensils" and the "Too Hot" package do not teach or suggest use of a soft plastic coating which comprises "polyvinyl chloride and a thermochromic additive," as specifically required in claim 6 on appeal. Moreover, we find nowhere in either Paper No. 28 or the examiner's answer (Paper No. 32), where the examiner even attempts to specifically address claims 6, 25 and 26 on appeal based on the teachings of the "Too Hot" package in view of "Soft Bite Utensils," or provides response to appellants' arguments on pages 42-43 of the brief regarding those claims. Thus, in this instance, the examiner has clearly not established a prima facie case of obviousness with respect to dependent claims 6, 25 and 26 on appeal.

Appeal No. 2004-1304
Application 08/730,625

In accordance with our foregoing discussions of the various rejections on appeal, the decision of the examiner rejecting claims 1 through 28 of the present application is affirmed-in-part.

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

AFFIRMED-IN-PART

IRWIN CHARLES COHEN)	
Administrative Patent Judge)	
)	
)	
)	BOARD OF PATENT
)	
NEAL E. ABRAMS)	APPEALS AND
Administrative Patent Judge)	
)	INTERFERENCES
)	
)	
CHARLES E. FRANKFORT)	
Administrative Patent Judge)	

CEF:psb

Appeal No. 2004-1304
Application 08/730,625

Knoble, Yoshida & Dunleavy
Eight Penn Center
Suite 1350
1628 John F. Kennedy Blvd.
Philadelphia, PA 19103

APPENDIX

1. An improved utensil for feeding a small child, comprising:

a handle; and

a feeding end attached to said handle, said feeding end comprising:

a rigid base portion that is made from a first material that has a relatively high capacity for storing and conducting heat, and

a coating of a relatively soft non-water absorbing plastic material provided over said rigid base portion, said relatively soft plastic material being formulated to change color when exposed to a substance, such as food, that is above a predetermined temperature that is appropriate for the comfortable consumption of food for a small child, whereby the presence of said base portion acts as a heat storage reservoir in order to lengthen and delocalize the color change response of the soft plastic material during use, thereby making the color change response more continuous and more noticeable to the caregiver.

9. A kit for feeding infants and small children, comprising:

a plurality of utensils, each of said utensils having a handle and a feeding end attached to said handle, said feeding ends of said utensils being, under unheated conditions, of different initial colors, and wherein said materials on said feeding ends of said utensils are, irrespective of the initial colors of the feeding ends, formulated to change color when exposed to a substance, such as food, that is above a predetermined temperature that is appropriate for the comfortable consumption of food for a small child, to turn to a uniform warning color that is recognizable by a user as such regardless of which utensil is in use at a given time.

27. An improved article for use in feeding a person, comprising:

a body; and

a food contacting surface on said body, said food contacting surface being of a first initial color, said food contacting surface being constructed and arranged to lose its color and turn white when exposed to a substance, such as food, that is above a predetermined temperature that is appropriate for the comfortable consumption of food for a small child, the white colorless state thereby acting as a uniform warning state that is recognizable by a user as such regardless of the initial color of the article.

28. A kit for feeding infants and small children, comprising:

a plurality of articles, each of said articles having a body and a food contacting surface on said body, said respective food contacting surfaces being of different colors; and wherein said food contacting surfaces are constructed and arranged to lose color and turn white when exposed to a substance, such as food, that is above a predetermined temperature that is appropriate for the comfortable consumption of food for a small child, the white colorless state thereby acting as a uniform warning state that is recognizable by a user as such regardless of the initial color of the article.