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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOSEPH C. WALSH

Appeal 2019-002079
Application 14/085,912
Technology Center 3700

Before STEFAN STAICOVI, CHARLES N. GREENHUT, and
MICHAEL J. FITZPATRICK, *Administrative Patent Judges*.

FITZPATRICK, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant¹ appeals under 35 U.S.C. § 134(a) from the Examiner's final decision rejecting claims 1, 4–17, and 30–33. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

¹ Appellant is the “applicant” under 37 C.F.R. § 1.42(b) and identifies Graphic Packaging International, LLC, as the sole real party in interest. Appeal Br. 1.

STATEMENT OF THE CASE

The Specification

The Specification's disclosure relates to methods of forming cartons and, more specifically, to heat-assisted formation of cartons. Spec. ¶3.

In general, one aspect of the disclosure is directed to a method of at least partially forming a carton. The method includes obtaining a blank comprising at least one fold line, heating an interior surface of the blank along the at least one fold line to form a heated fold line, and folding the blank about the heated fold line.

Id. ¶4.

The Claims

Claims 1, 4–17, and 30–33 are rejected. Final Act. 1. Claims 18–29 are also pending but they are withdrawn from consideration. *Id.* Claims 1 and 30 are independent. Claim 1 is illustrative and reproduced below.

1. A method of at least partially assembling a carton from a blank, the method comprising:

obtaining a blank comprising at least one fold line, the blank comprising paperboard, an exterior surface having a coating, and an interior surface free from the coating;

obtaining a heater;

positioning the blank comprising the at least one fold line proximate the heater;

operating the heater, after positioning the blank comprising the at least one fold line proximate the heater, and heating the interior surface of the blank, the heating the interior surface comprises heating the at least one fold line to form an at least one heated fold line, during the heating the at least one fold line is spaced apart from the heater; and

folding the blank, after heating the at least one fold line, about the at least one heated fold line to form a partially assembled carton, during the folding the blank is spaced apart from the heater.

Appeal Br. 18.

The Examiner's Rejections

The rejections before us are:

1. claims 1, 4–17, and 30–33 as not enabled in violation of 35 U.S.C. § 112(a) (Final Act. 2);
2. claims 1, 4–17, and 30–33 as indefinite in violation of 35 U.S.C. § 112(b) (*id.* at 3);
3. claim 1 as unpatentable under 35 U.S.C. § 103 over Seiche² (*id.* at 4);
4. claims 1, 4–8, and 30–33 as unpatentable under 35 U.S.C. § 103 over Burnside³ and Seiche (*id.* at 6);
5. claim 9 as unpatentable under 35 U.S.C. § 103 over Burnside, Seiche, and Striplin⁴ (*id.* at 11);
6. claims 10–14 as unpatentable under 35 U.S.C. § 103 over Burnside, Seiche, and Rumberger⁵ (*id.* at 12);
7. claim 15 as unpatentable under 35 U.S.C. § 103 over Burnside, Seiche, Rumberger, and Striplin (*id.* at 13);
8. claim 16 as unpatentable under 35 U.S.C. § 103 over Burnside, Seicher, Rumberger, and Zinn⁶ (*id.* at 14); and
9. claim 17 as unpatentable under 35 U.S.C. § 103 over Burnside, Seiche, Rumberger, and Hashinaga⁷ (*id.* at 15).

² US 2012/0071312 A1, published Mar. 22, 2012 (“Seiche”).

³ US 4,979,932, issued Dec. 25, 1990 (“Burnside”).

⁴ US 3,227,352, issued Jan. 4, 1966 (“Striplin”).

⁵ US 3,158,073, issued Nov. 24, 1964 (“Rumberger”).

⁶ US 2,822,653, issued Feb. 11, 1958 (“Zinn”).

⁷ US 5,359,285, issued Oct. 25, 1994 (“Hashinaga”).

DISCUSSION

Rejection 1—Lack of Enablement

The Examiner rejected the claims for lack of enablement, stating as follows:

[T]he specification does not require or describe “operating the heater, **after** positioning the blank comprising the at least one fold line proximate the heater”, as newly amended into claims 1 and 30. It was Examiner’s understanding that the heater is operated and the blank passes by the heater, contrary to the new limitation, which seems to require the blank to be first positioned proximate the heater prior to the heater being operated.

Final Act. 2. Appellant argues that the following excerpt from the Specification enables the limitation in question: “As shown in FIG. 6, a method 600 of at least partially forming a carton may include obtaining a blank and applying heat to a surface of the blank along a fold line at step 601.” Spec. ¶36; Appeal Br. 33. We are persuaded by Appellant.

In the Answer, the Examiner provides his construction of the limitation, stating: Paragraph 30 of the Specification “is contrary to the subject ‘after’ limitation, which seems to require the blank to be first positioned proximate the heater prior to the heater being operated.” Ans. 4. This construction is erroneous. Claims 1 and 30 recite “operating the heater after positioning the blank.” They do not recite, for example: *not operating the heater until after positioning the blank*. In other words, the claims do not preclude operating the heater before positioning the blank.

For the foregoing reasons, we reverse the enablement rejection of claims 1, 4–17, and 30–33 under 35 U.S.C. § 112(a).

Rejection 2—Indefiniteness

The Examiner rejected the claims as indefinite, stating the same limitation (discussed above) “is unclear to Examiner because the metes and bounds of the term ‘proximate’ are indefinite in this context.” Final Act. 3. The Examiner added the following questions: “For example, must the entire fold line be under the heater? Would just the leading edge of the fold line suffice?” *Id.*

Appellant argues that a person of ordinary skill in the art would understand the metes and bounds of “proximate” in the context of the claims based both on the Specification and surrounding language in the claims themselves. Appeal Br. 34. We are persuaded by Appellant.

The Specification illustrates a relatively *close* placement of heater 3 with respect to fold line 23. Spec. Figs. 2A, 2B; *see also* Spec. ¶29 (Discussing Fig. 2A and stating: “The blank 20 may be inserted into the system 2 and arranged to travel proximate the heater 3 such that the fold line 23 is generally in registration with the heater 3.”). Further, claim 1 itself further recites “heating the interior surface of the blank, the heating the interior surface comprises heating the at least one fold line to form an at least one heated fold line, during the heating the at least one fold line is spaced apart from the heater.” In light of these disclosures, a person of ordinary skill in the art would understand the metes and bounds of “proximate” as used in the claims to be a distance between the heater and the blank that forms a heated folded line in registration with the heater. In other words, by not specifying the exact distance between the heater and the blank, the claim is merely broad, not indefinite.

For the foregoing reasons, we reverse the indefiniteness rejection of claims 1, 4–17, and 30–33 under 35 U.S.C. § 112(b).

Rejection 3—Seiche

Claim 1 recites “an exterior surface having a coating, and an interior surface free from the coating.” The Examiner concedes that Seiche does not explicitly disclose this combination of limitations. *See* Final Act. 4–5 (“Seiche teaches . . . the blank comprising . . . an exterior surface having a coating [However,] Seiche does not specifically teach . . . the interior surface free from the coating.”).

The Examiner relies on the first sentence of paragraph 46 of Seiche as disclosing coating an exterior surface of a paperboard blank. *See* Final Act. 4. To be precise, however, Seiche does not disclose the exterior surface, in particular, as having a polyethylene coating but rather more generically describes the blank as a whole as having a coating. Seiche ¶46. The relied upon sentence states: “The laminate 1 is usually provided with a polyethylene coating, and this coating is at least partially melted.” *Id.*

To meet claim 1’s recitation of “an interior surface free from the coating,” the Examiner first points out that the first sentence of paragraph 46 of Seiche employs the word “usually” and, thus, does not require a coating. Final Act. 5. The Examiner next finds that Seicher’s coating is not critical to formation of its heated fold line. *Id.* Finally, the Examiner provides a logical reason why a person of ordinary skill in the art might not include a coating, namely to save time or expense in applications where a coating is not necessary. *Id.* at 6.

A person having ordinary skill in the art may be motivated to have an interior free from a coating, for example, in cases where the carton would store a non-liquid product or any product that

would not require an interior coating. A person having ordinary skill in the art would recognize that this would likely lead to a more inexpensive implementation since the amount of coating required would be cut in half.

Id. The error, however, is that the Examiner never shows why a person of ordinary skill in the art would omit the coating on the interior surface but not the exterior surface.

For the foregoing reasons, we reverse the rejection of claim 1 under 35 U.S.C. § 103 as unpatentable over Seiche.

Rejection 4—Burnside in View of Seiche

Rejection 4 was directed against claims 1, 4–8, and 30–33. Appellant argues that the “*Burnside in View of Seiche et al. Fails to Disclose Heating a Fold Line*” and “an Uncoated Interior Surface.” Appeal Br. 43, 45 (underlining omitted). Appellant additionally argues that it would have not been obvious to remove Burnside’s “thermoplastic resin [i.e., coating] from one or more surfaces thereof.” *Id.* at 47. Appellant implies that these arguments are relevant to all of the claims in the instant rejection, but they are not. Appeal Br. 43–45.

We group the rejected claims into two groups based on whether they recite (or incorporate by reference) “an exterior surface having a coating, and an interior surface free from the coating.”

Claim 1 does recite that limitation. Appeal Br. 50. Claims 4–8 and 32 ultimately depend from claim 1 and, therefore, incorporate it by reference. *Id.* at 50–51.

Independent claim 30 recites “a blank having an inner surface, an outer surface, the outer surface having a coating applied thereon.” Appeal Br. 52. Unlike claim 1, claim 30 does not specify whether the interior

surface is coated. *Id.* Claim 31 depends from claim 30 and likewise does not specify whether the interior surface is coated. Claim 33 depends from claim 30, but does specify that “the inner surface of the blank is devoid of coating.” Thus, we group claim 33 with claims 1, 4–8, and 32 and discuss them below separately from claims 30 and 31.

Claims 1, 4–8, 32 and 33

The Examiner concedes that Burnside, like Seiche, does not explicitly disclose “an exterior surface having a coating, and an interior surface free from the coating,” as recited in claim 1 and otherwise required by claims 4–8, 32, and 33. *See* Final Act. 6 (“Burnside teaches . . . a blank comprising . . . an exterior surface having a coating [However,] Burnside does not teach the blank has an interior surface free from the coating.”).

The Examiner relies on Burnside’s express statement that its invention is not limited to that which is specifically disclosed and extrapolates therefrom to obtain the limitation in question:

Regarding the interior surface being free from the coating, Burnside discloses “For this description, however, it is assumed that the apparatus is adapted to produce boxes coated with a thermoplastic resin that are sealed without any build-up or loose deposits of the resin within the finished box. It will be obvious, however, that other boxes can be formed utilizing this invention even though the requirements for the application are not so strict.” (col. 2, lines 44–51). Therefore, it would have been obvious to a person having ordinary skill in the art, at the time the invention was made, to apply the method of Burnside in view Seiche to blanks having coating only the outer surface, since the method of partially forming a carton does not require the inner surface to have a coating. . . .

A person having ordinary skill in the art may be motivated to have an interior free from a coating, for example, in cases where the carton would store a non-liquid product or any product that

would not require an interior coating. A person having ordinary skill in the art would recognize that this would likely lead to a more inexpensive implementation since the amount of coating required would be cut in half.

Final Act. 7.

These findings do not support a prima facie case of obviousness. First, the fact that Burnside contemplates other—not specifically described—embodiments does not provide a specific enough reason for why a person of ordinary skill would have decided to modify Burnside specifically by removing its coating, let alone by removing the coating only from the interior surface. The Examiner’s statement that a person of ordinary skill in the art would be motivated to omit the interior coating if it were not required in order to save money is perfectly logical. However, the Examiner has not provided a reason with rational underpinnings why the skilled person would, under such a scenario, not also omit the coating from the exterior surface. More specifically, the Examiner has not provided a reason for why the skilled person would, “in cases where the carton would store a non-liquid product,” omit the interior surface coating but retain the exterior surface coating.

For the foregoing reasons, we reverse the rejection of claims 1, 4–8, 32 and 33 over Burnside and Seiche.

Claims 30 and 31

For these claims, Appellant’s relevant argument is that “*Burnside* in View of *Seiche et al.* Fails to Disclose Heating a Fold Line.” Appeal Br. 43. For the substance of Appellant’s argument, Appellant directs us to Section III(A) of the Appeal Brief. *Id.* There, Appellant argues that Seiche

fails to disclose, or render obvious, heating *an existing* fold line (e.g., one that has been scored prior to heating). Appeal Br. 37–39.

Seiche discloses heating to form a fold line. Seiche ¶7 (“at least one area intended for the preparation of a fold line is subjected to heat”), Figs. 1–4. Seiche additionally discloses that, “[a]ccording to a variant of the method, mechanical scoring is also carried out in the area of the fold line in addition to the thermal treatment.” *Id.* ¶30. Based on at least these teachings, the Examiner determined:

[I]t would have been obvious to a person having ordinary skill in the art, at the time the invention was made, to modify the method of Seiche, by applying the method to a blank that already has a fold line, as suggested by Seiche, since Seiche specifically discloses that mechanical scoring (i.e. forming of fold lines) may also be carried out in the area of the fold line in addition to the thermal treatment (i.e. generating a heated fold line), and a person having ordinary skill in the art would understand based on Seiche’s teachings, splitting the bonds among the cardboard fibers by heating in the vicinity of such a fold line would promote folding about the fold line.

Final Act. 5. This is a prima facie case of obviousness.

Appellant argues that Seiche’s teachings at paragraph 30 of optionally carrying out mechanical scoring, in addition to the thermal treatment, would be understood by the skilled person as limited to carrying out mechanical scoring *only after* heat forming a folding line. Appeal Br. 37–39. Appellant relies on the Declaration (dated Oct. 19, 2017) of the inventor, Joseph C. Walsh, to support those arguments. *Id.* at 35–37. Appellant’s arguments are not persuasive. Seiche itself is the most pertinent evidence regarding what Seiche teaches. It explicitly teaches mechanical scoring “in addition” to heat treatment and, thus, combining the two. Seiche ¶30.

Mr. Walsh's purported reason for why a skilled person would read into that broad disclosure a specific requirement of heating first and scoring later (i.e., because the scoring would compress fibers, thereby reducing the efficacy of any subsequent heat treatment) is not persuasive. *See* Walsh Decl. ¶9. Mr. Walsh cites no third party or documentary evidence to support his opinion as to what happens when a mechanically scored paperboard fold line is heated. Additionally, we agree with the Examiner, that his Declaration must be given less weight than that of an uninterested person. *See* Ans. 4–5 (citing *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 294 (Fed. Cir. 1985)). Moreover, mechanical scoring is not limited to compressing Seiche's laminate 1, as Mr. Walsh asserts (*see* Decl. ¶9, and a skilled artisan would readily know that mechanical scoring would also include making cuts into laminate 1. Mr. Walsh has not adequately explained why cutting the fibers in Seiche's laminate 1 would reduce the efficacy of any subsequent heat treatment.

Appellant has not apprised us of error in the rejection of claims 30 and 31 over Burnside and Seiche, and we therefore affirm it.

Rejections 5 Through 9

These rejections are collectively of claims 9–17, all of which ultimately depend from claim 1. Appeal Br. 51. In these rejections, the Examiner employs additional references beyond Burnside and Seiche to meet limitations recited by claims 9–17. Final Act. 11–15. The Examiner does not rely on these additional references in a way that would cure the deficiency in the rejection of claim 1 over Burnside and Seiche. *Id.* Accordingly, we reverse the obviousness rejections of claim 9–17.

SUMMARY

Claims Rejected	35 U.S.C.	Basis	Affirmed	Reversed
1, 4-17, 30-33	§ 112(a)	Enablement		1, 4-17, 30-33
1, 4-17, 30-33	§ 112(b)	Indefiniteness		1, 4-17, 30-33
1	§ 103	Seiche		1
1, 4-8, 30-33	§ 103	Burnside, Seiche	30, 31	1, 4-8, 32, 33
9	§ 103	Burnside, Seiche, Striplin		9
10-14	§ 103	Burnside, Seiche, Rumberger		10-14
15	§ 103	Burnside, Seiche, Rumberger, Striplin		15
16	§ 103	Burnside, Seiche, Rumberger, Zinn		16
17	§ 103	Burnside, Seiche, Rumberger, Hashinaga		17
Overall Outcome			30, 31	1, 4-17, 30-33

AFFIRMED-IN-PART