

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FREE-FLOW PACKAGING INTERNATIONAL, INC.,
Petitioner,

v.

AUTOMATED PACKAGING SYSTEMS, INC.,
Patent Owner.

Case IPR2016-00350
Patent 7,550,191

Before CHRISTOPHER L. CRUMBLEY, JON B. TORNQUIST, and
CHRISTOPHER M. KAISER, *Administrative Patent Judges*.

CRUMBLEY, *Administrative Patent Judge*.

DECISION

Denying Institution of *Inter Partes* Review
35 U.S.C. § 314(a) and 37 C.F.R. § 42.108

I. INTRODUCTION

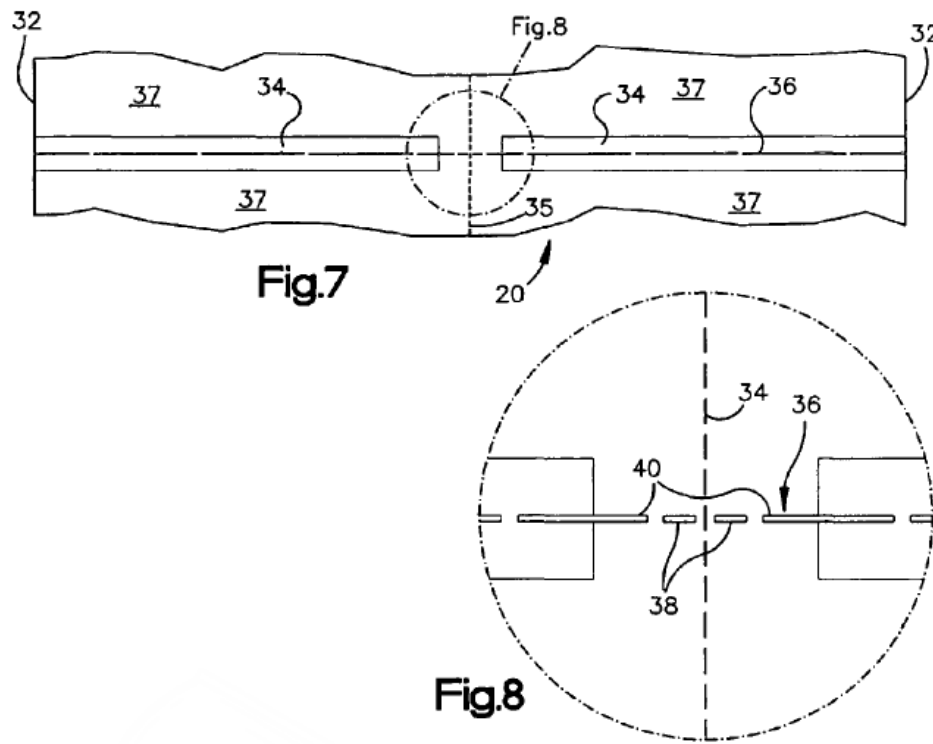
Free-Flow Packaging International, Inc. (“Free-Flow”) filed a Petition requesting an *inter partes* review of claims 1–13 of U.S. Patent No. 7,550,191 (Ex. 1001, “the ’191 patent”). Paper 2 (“Pet.”). Automated Packaging Systems, Inc. (“Automated”), the assignee of the ’191 patent, filed a Preliminary Response to the Petition. Paper 6 (“Prelim. Resp.”).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314(b); 37 C.F.R. § 42.4(a). Pursuant to 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless the information presented in the Petition and any Preliminary Response shows “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Taking into account the information presented, we conclude that the record does not establish that there is a reasonable likelihood that Free-Flow will prevail in challenging claims 1–13 of the ’191 patent as unpatentable. Accordingly, we do not institute trial.

A. Related Matters

The parties have identified *Automated Packaging Systems, Inc. v. Free-Flow Packaging International, Inc.*, No. 5:14-cv-02022 (N.D. Ohio), as a related matter. Pet. 2; Paper 5, 2. In addition, the parties note that a related patent is being challenged in IPR2016-00351 (challenging U.S. Patent No. 7,767,288). Pet. 2; Paper 5, 2.

edges 32 toward a longitudinally extending line of weakness 35, which is preferably a line of perforations. *Id.* at 3:43–51. The web also has transverse lines of weakness 36, which are also perforations, but these perforations are not uniform in length. *Id.* at 3:54–61. The transverse lines of weakness are shown in Figures 7 and 8 of the '191 patent:



Figures 7 and 8 of the '191 patent show transverse seals 34 having transverse lines of weakness 36, comprising a pair of small perforations 38 closely spaced to the longitudinal line of weakness 34. *Id.* at 3:61–63. Intermediate length perforations 40 are adjacent to small perforations 37, and then perforations of “substantial length” extend to side edges 32. *Id.* at 3:65–4:5.

As shown in Figure 6 above, when the web is fed into the disclosed inflation machine, inflation nozzle 48 extends into the channel between transverse seals 34. The web is split along the longitudinal line of weakness by nozzle support 55, but the '191 patent discloses that the web remains intact along the transverse lines of weakness, because small perforations 38 are of sufficient strength to avoid a longitudinal split of the web. *Id.* at 5:43–50.

C. Illustrative Claims

Challenged claims 1 and 8 are independent, with claims 2–7 depending, directly or indirectly, from claim 1 and claims 9–13 depending from claim 8. Claim 1 is illustrative of the challenged claims and is reproduced below:

1. A web for the manufacture of fluid filled units comprising:
 - an elongate heat sealable, flattened plastic face and back layers including imperforate sections;
 - the layers being imperforately joined together at a side edge by a selected one of a fold and a seal;
 - the layers being joined by longitudinally spaced transverse seals, each transverse seal extends from the side edge and terminates in a spaced relationship with a fill edge of the layers;
 - transverse lines of weakness extending from the side edge to the fill edge in a longitudinal direction of the seals that allow adjacent pouches to be separated;
 - the side edge and transverse seals and lines of weakness together delineating a string of pouches with each pouch having two imperforate sections, three imperforate sides and a centrally located fill opening at its fourth side; and,

the transverse lines of weakness being defined by spaced perforations extending through both layers with the perforations nearest to the fill edge of the layers being shorter in length than the lengths of other perforations that are spaced further from the fill edge and extend toward the side edge.

D. Asserted Ground of Unpatentability

Free-Flow challenges claims 1–13 on a single ground of unpatentability: that the claims are unpatentable under 35 U.S.C. § 103(a)¹ as having been obvious over Perkins² and Mykleby.³ Pet. 3. Free-Flow asserts that both references are prior art to the '191 patent under 35 U.S.C. § 102(b). Pet. 23, 25. Automated does not, at this stage of the proceeding, challenge the prior art status of any reference.

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, we construe claim terms in an unexpired patent according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b);

¹ The relevant sections of the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, took effect on March 16, 2013. Because the application from which the '191 patent issued was filed before that date, our citations to Title 35 are to its pre-AIA version.

² US Patent No. 6,209,286 B1 to Perkins et al. (issued Apr. 3, 2001) (Ex. 1006).

³ US Patent No. 5,187,917 to Mykleby (issued Feb. 23, 1993) (Ex. 1007).

Cuozzo Speed Techs., LLC v. Lee, 579 U.S. ___, No. 15-446, slip op. at 13 (U.S. June 20, 2016). Under this standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Neither party identifies any terms as requiring construction in order to resolve this matter. We agree with the parties that there are no terms that must be construed expressly in order to resolve the present dispute. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy”).

B. Obviousness Over Perkins and Mykleby

Free-Flow contends that claims 1–13 are unpatentable under 35 U.S.C. § 103(a), as their subject matter would have been obvious over the combined disclosures of Perkins and Mykleby. Pet. 34–60. Free-Flow explains how the combined references teach the subject matter of each challenged claim and asserts that a person of ordinary skill in the art would have had reason to combine or modify the references. *Id.* at 28–60. Free-Flow also relies upon the Declaration of Dr. Robert M. Kimmel (Ex. 1004) to support its positions.

1. Perkins

Perkins is directed to a “machine and method for the manufacture of a continuous production of pneumatically filled packaging pillows.” Ex. 1006, (57). Perkins discloses various sheet materials which may be used

with its inflation and production machine. *Id.* at Figs. 1, 8, 9. Figure 1 of Perkins depicts one such sheet material, and is reproduced below:

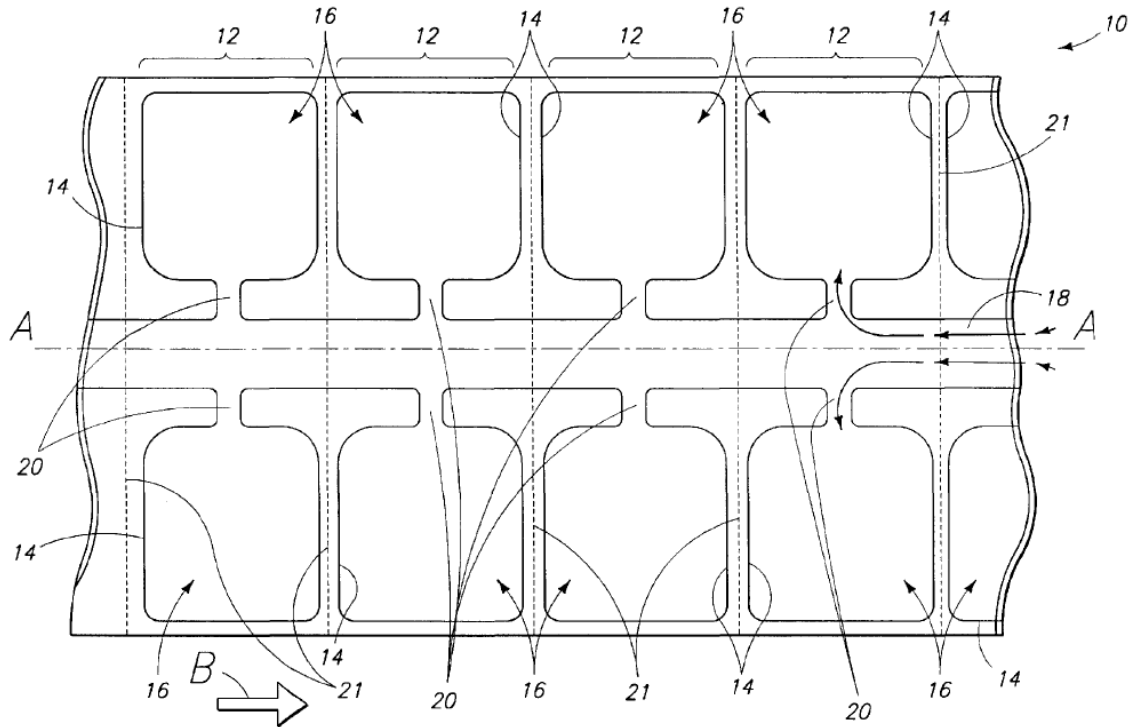


FIG. 1

Figure 1 of Perkins depicts a strip of flattened preformed film material 10 for use with the disclosed machine. *Id.* at 5:52–53. Preferably, the film material is formed from two sheets of film layers, but may also be a single folded film layer. *Id.* at 5:56–58. The material has flat pillow sections 12, each of which include continuous heat seals 14 which define two pillow chambers 16 off common inflation channel 18, oriented along longitudinal axis A–A of strip 10. *Id.* at 5:66–6:4. Perforations or score lines 21 define the transverse (or lateral) edge boundaries of the flat pillow sections. *Id.* at 6:14–16. Optionally, a perforation (not shown in Figure 1) may run the length of common inflation channel 18. *Id.* at 6:17–18.

One embodiment of Perkins' disclosed machine for manufacturing inflatable packaging is shown in Figure 4:

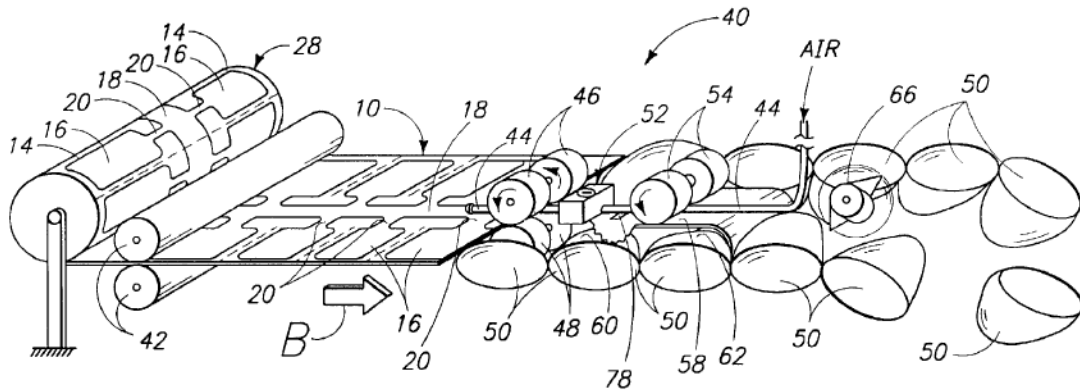


FIG. 4

Figure 4 of Perkins depicts sheet material 10 being inflated and sealed by machine 40. The opening of common inflation channel 18 of the material is fed onto inflation tube 44 and advanced by drive rollers 46. *Id.* at 6:37–54. Seal forming apparatus 52 forms a pair of continuous seals along the sides of common inflation channel 18, trapping pressurized air within each pillow chamber 16. *Id.* at 7:4–13. Blade 78 on inflation tube 44 cuts one or both layers of sheet material 10 along common inflation channel 18, and air-filled pillows 50 are separated from each other along perforations 21 using cutter 66. *Id.* at 8:23–48.

2. Mykleby

Mykleby is directed to an “automatic packaging apparatus” for use with “a plurality of flexible pouches forming a continuous sheet of web material.” Ex. 1007, [57]. Preferably, Mykleby’s film is formed from a

folded web, the folded edge forming the bottom edge of the flexible pouch.

Id. at 10:3–6. Figure 6 of Mykleby shows the disclosed web material:

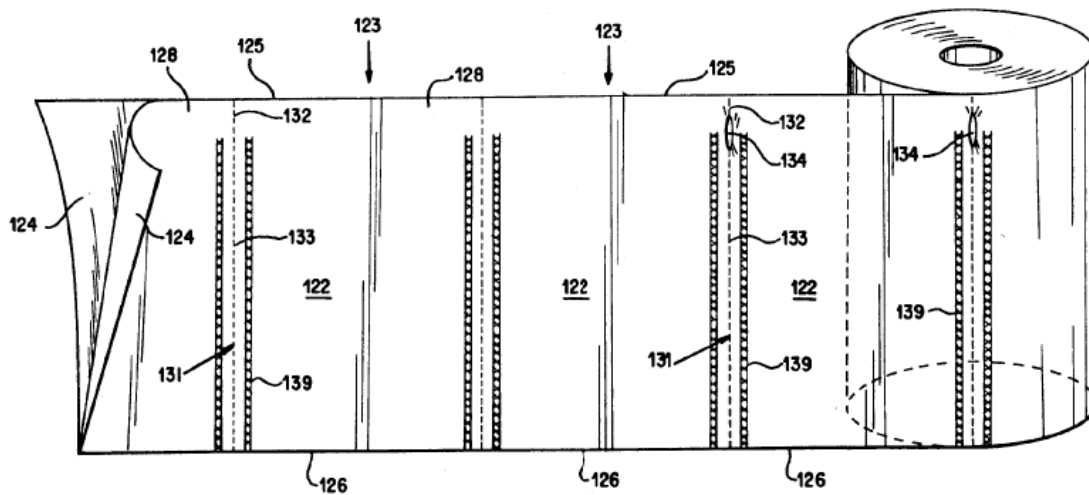


FIG. 6

Figure 6 of Mykleby depicts a continuous sheet forming a plurality of flexible pouches 122, each comprising opposing side heat seals 139 which extend from bottom edge 126 and terminate a fixed distance from top edge 125. *Id.* at 10:1–11. The sheet preferably has perforations 131 extending from top edge 125 to bottom edge 126, positioned between heat seals 139. *Id.* at 10:21–23. In a preferred embodiment, perforation 131 comprises upper perforated portion 132 and lower perforated portion 133, such that upper perforated portion 132 has a higher tearing strength than lower perforated portion 133. *Id.* at 10:30–32. Mykleby discloses that the tearing strength of the perforations can be varied by adjusting the length of slits within the perforations, or by other means known to those skilled in the art of perforations. *Id.* at 10:34–38.

In another preferred embodiment depicted in Figure 6, Mykleby discloses opening 134 between upper perforated portion 132 and lower perforated portion 133. *Id.* at 10:39–44. According to the reference, this allows the lower portion of the continuous sheet to separate, but “it is preferred to stop such separation at the lower end of upper perforated portion 132 so that overlap portion 128 of each flexible pouch 122 remains interconnected with adjacent flexible pouches . . . until [it] is routed through the entire automated packaging apparatus 110.” *Id.* at 10:49–54.

3. Analysis of Obviousness

Free-Flow asserts that each limitation of the challenged claims is taught or suggested by at least one of the Perkins and Mykleby references. Pet. 34–60. Perkins is said to teach all limitations of the challenged claims, except “the transverse lines of weakness being defined by spaced perforations extending through both layers with the perforations nearest to the fill edge of the layers being shorter in length than the lengths of other perforations that are spaced further from the fill edge and extend toward the side edge.” *Id.* According to Dr. Kimmel, “Perkins differs only from the Challenged Claims in that Perkins discloses dunnage units separated by uniform perforations, as opposed to variable perforations.” Ex. 1004 ¶ 69. Free-Flow relies on Mykleby to teach these variable perforations. Pet. 42.

Free-Flow argues that a person of ordinary skill in the art would have been “strongly motivated” to apply Mykleby’s variable perforations to the perforations of Perkins “for a simple reason: both patents are directed to the same problem—automated, continuous production of inflatable sealed plastic bag units.” *Id.* at 29–30. Noting that the references differ only in

their perforation patterns, Free-Flow contends that a person of ordinary skill in the art would have considered the references “highly similar and completely complementary,” and would “look to both [references] to obtain advantages of the other.” *Id.* at 30.

Citing Dr. Kimmel, Free-Flow argues Perkins recognized that automation generally increases production rate and decreases costs. *Id.* at 31 (citing Ex. 1004 ¶ 77). Dr. Kimmel testifies that a person of ordinary skill in the art “would have understood the potential for the variable perforations disclosed by Mykleby to increase production rate of sealed plastic bag units and decrease cost associated with torn or damaged units by facilitating separation of individual bag units.” Ex. 1004 ¶ 77.

Among other arguments, Automated disputes that Free-Flow has set forth an adequate reason to combine Perkins and Mykleby. Prelim. Resp. 14–25. We agree, and are not persuaded that Free-Flow has made an adequate showing that a person of ordinary skill in the art would have modified the web of Perkins with the perforations of Mykleby. Free-Flow’s first argument on this point is that one of ordinary skill in the art would have sought to combine the references because they are both “directed to the same problem.” Pet. 29–30. Automated argues that the defined “problem”—namely “automated, continuous production of inflatable sealed plastic bag units”—is not really a problem, but rather a definition of the field of technology to which Perkins and Mykleby pertain. Prelim. Resp. 16. We agree. Free-Flow’s argument may be enough to show that the two references are analogous art, *see Wyers v. Master Lock Co.*, 616 F.3d 1231, 1238 (Fed. Cir. 2010), but simply demonstrating that a set of references are

all directed to the same problem is not, by itself, a sufficient rationale to combine the references. *See id.* (upon finding that two references were directed to the same problem, the Court proceeded to analyze whether a person of ordinary skill in the art would have been motivated to combine the references); *see also In re Kahn*, 441 F.3d 977, 987–88 (Fed. Cir. 2006) (noting that the inquiry as to whether a person of ordinary skill in the art would have sought to combine the references “picks up where the analogous art test leaves off”). Accordingly, Free-Flow’s first argument is insufficient to show that a person of ordinary skill in the art would have combined Perkins and Mykleby.

Automated also argues that Free-Flow’s second reason for combining the references—that Mykleby would increase production rate and decrease cost—is unexplained. Prelim. Resp. 23. Automated contends that Free-Flow does not explain how the variable-length perforations of Mykleby would increase production or decrease costs when used in the web of Perkins. *Id.* For the following reasons, we agree.

According to Free-Flow, Perkins expresses a desire for the “continuous, quick production of plastic bags” to be used in packaging applications. Pet. 31. To that end, Perkins allegedly discloses a web that can be “continuously fed into an apparatus to create plastic bags that are separated by perforations and can be broken apart into pillows as desired by the end user.” *Id.* (internal quotations omitted). From this, Free-Flow concludes that Perkins recognizes that “automation generally increases production rate and decreases costs.” *Id.*

Even accepting these statements as correct, Free-Flow does not explain what problems exist in the web of Perkins, or how those problems would have been solved by Mykleby. By Free-Flow's own analysis, the problem of "continuous, quick production of plastic bags" is addressed by the web and apparatus of Perkins itself; it is unclear why a person of ordinary skill in the art would have considered it desirable to further modify Perkins to include the variable perforations of Mykleby. Free-Flow simply states that a person of ordinary skill in the art "would have understood the potential for the variable perforations disclosed by Mykleby to increase production rate of sealed plastic bag units and decrease cost associated with torn or damaged units by facilitating separation of individual bag units."⁴

Pet. 31. But as Dr. Kimmel testifies, Mykleby identifies the benefit of variable-length perforations as "allow[ing] the pouches to separate from the lower perforated portion first without separating the upper perforated portion. . . . These variable perforations allow individual pouches to be filled with fluid and separated but remain connected until the sheet has moved through the entire automatic packaging apparatus." Ex. 1004 ¶ 74. Free-Flow does not explain, nor can we discern, why this partial separation would "increase production and decrease costs" when used in the web of Perkins.

⁴ The only relevant evidence Free-Flow cites in support of this statement is paragraph 77 of Dr. Kimmel's Declaration, which merely parrots the language of the Petition word for word, without providing any additional analysis or explanation. *Compare* Ex. 1004 ¶ 77, *with* Pet. 31.

Because Free-Flow has not made an adequate showing that a person of ordinary skill in the art would have had a reason to combine Perkins and Mykleby,⁵ we cannot conclude that Free-Flow has shown that “there is a reasonable likelihood that the petitioner would prevail with respect to” any of claims 1–13 on the ground of obviousness over the combination of Perkins and Mykleby. 35 U.S.C. § 314(b). We, therefore, decline to institute *inter partes* review of the challenged claims on this ground.

III. CONCLUSION

For the foregoing reasons, we conclude that the information presented in the Petition and Preliminary Response does not establish that there is a reasonable likelihood that Free-Flow will prevail in challenging claims 1–13 of the ’191 patent as unpatentable under § 103(a).

IV. ORDER

In consideration of the foregoing, it is hereby ordered that the Petition is *denied*.

⁵ We express no opinion as to whether Free-Flow could have made an adequate showing that a person of ordinary skill in the art would have had a reason to combine Perkins and Mykleby; we determine only that Free-Flow did not do so.

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