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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte NORMAN DOUGLASS FAST and
WALTER ALEXANDER JOHNSON

Appeal 2010-010666
Application 11/899,261
Technology Center 3600

Before: STEVEN D.A. McCARTHY, JOHN W. MORRISON, and
NEIL T. POWELL, *Administrative Patent Judges*.

POWELL, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Norman Douglass Fast and Walter Alexander Johnson (Appellants)
appeal under 35 U.S.C. § 134 from a rejection of claims 1-7. We have
jurisdiction under 35 U.S.C. § 6(b).

The Claimed Subject Matter

Claim 1, reproduced below, is representative of the claimed subject matter:

1. A method of rolling a first and second single-ply membrane sheet having seam tape applied along one edge comprising placing the first sheet on top of the second sheet with the seam tape of each of said sheets being at the same end, and with the first sheet having its seam tape not overlay the seam tape of the other sheet, and then rolling the sheeting.

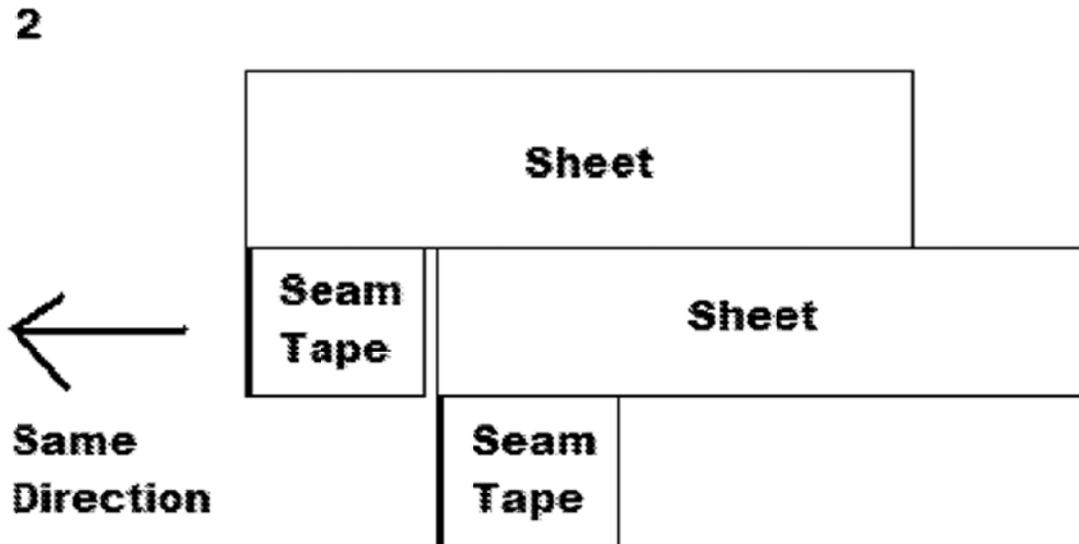
The Rejection

Claims 1-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Knowlton (US 2004/0154265 A1, pub. Aug. 12, 2004).

ANALYSIS

The Examiner finds that the method Knowlton discloses for arranging sheets in the exemplary embodiment shown in Knowlton's Figure 1 meets all of the limitations of claim 1 except that "Knowlton does not disclose the seam tape edge of each of the sheets being at the same end." Ans. 4. In addressing this difference between the embodiment of Knowlton's Figure 1 and claim 1, the Examiner at page 4 of the Answer points to Knowlton's disclosure that "[i]t is also possible to have the seam tapes facing the same direction as long as the uncoated edge 18 of sheet 12 does not overlie the seam tape coated edge 21 of sheet 16." Knowlton, para. [0015]. The Examiner finds that this excerpt of Knowlton "can be interpreted as a teaching of any orientation that has the seam tapes face the same direction." Ans. 5 (underlining in original). Based on this, the Examiner posits that this

portion of Knowlton suggests as one possibility the arrangement of sheets shown in the following diagram that the Examiner supplied in the Answer. *Id.* at 5 and 7. A portion of a diagram provided by the Examiner on page 7 of the Answer is reproduced below.



The excerpted portion of the diagram from page 7 of the Answer shows two stacked sheets having attached seam tape disposed at the same end of the sheets.

The Examiner finds that “[t]he motivation for the positioning of the seam tape edge would be to follow the teaching of Knowlton of positioning the seam tapes in the same direction” and “to provide for easy removal of the membrane sheets when the rolls are unwound and used.” Ans. 4. Additionally, the Examiner asserts that “[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp.” *Id.* at 6

(quoting *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007)). The Examiner concludes that it would have been obvious to arrange Knowlton's sheets in the manner shown in the above-reproduced diagram, thereby arriving at the method of claim 1. Ans. 4.

Appellants contend that Knowlton does not suggest arranging sheets "with the seam tape of each of said sheets being at the same end," and that Knowlton teaches away from arranging sheets in this manner. Br. 3-4. In support of the latter, Appellants emphasize certain portions of Knowlton's paragraphs [0004] and [0015], which Appellants read as teaching "having the seam tape edges of the first and second sheets at *opposite* ends, to avoid having an uncoated edge of one of the sheets overlying the seam tape coated edge of the other sheet, thereby maintaining a uniform thickness across the sheets for ease of rolling the sheets." *Id.* at 4 (emphasis in original).

We consider first whether Knowlton suggests arranging the sheets in the manner suggested by the Examiner. Knowlton includes multiple disclosures that demonstrate Knowlton uses the term "facing" to refer to the vertical arrangement of the seam tape. For example, Knowlton discloses arranging one seam tape "preferably facing upward" and the other seam tape "preferably facing downward." Knowlton, para. [0004]. Similarly, the Abstract of Knowlton discloses arranging one seam tape "facing one direction" and the other seam tape "facing the opposite direction, either up or down." On the other hand, when referring to the horizontal arrangement of the seam tapes, Knowlton consistently uses the terms "end," "edge," and "side." For example, Knowlton discloses that "[t]he seam tape of the first sheet is at one end . . . whereas the seam tape of the adjoining sheet is at the opposite side." *Id.* Abst. Similarly, Knowlton discloses that the "[t]he first

sheet will have seam tape along one edge” and “[t]he second sheet will have the seam at the opposite end.” Knowlton, para. [0004]. In view of these disclosures, we find that Knowlton’s disclosure that “[i]t is also possible to have the seam tapes facing the same direction” suggests modifying the embodiment shown in Fig. 1 to have the seam tapes arranged the same vertically (i.e., either both on the top or both on the bottom of their respective sheets), not modifying it to have the seam tapes at the same end as suggested by the Examiner.

We consider next whether the Examiner correctly concluded that one of ordinary skill in the art would have had reason to modify the seam tapes described by Knowlton in the fashion claimed by the Appellants so as to “provide for easy removal of the membrane sheets when the rolls are unwound and used.” Ans. 4. The Examiner does not explain this rationale further. The Appellants do not respond to this rationale directly, but do argue that Knowlton teaches away from arranging sheets in the manner suggested by the Examiner. “A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994).

Apparently responding to Appellants’ argument that Knowlton teaches away from the claimed invention, the Examiner states that:

with respective [sic] to the paragraph 0004 (where the roll is discussed as preferable having a uniform diameter), the diameter of the roll is discussed as a “generally” uniform diameter and that the orientation of the sheets and seam tapes is a preferred orientation (see use of ‘preferably’ in

paragraph 0004), and the sheets and seam tapes are not required to have this orientation.

Ans. 5-6.

Regarding these assertions, we first note that Knowlton's paragraph [0004] uses the word "preferably" only to refer to whether the respective seam tapes face up or down, it does not use the word "preferably" to modify the lateral positions of the seam tapes or the diameter of the roll. Indeed, with respect to the lateral positions of the seam tapes, Knowlton's paragraph [0004] states that "[t]he first sheet *will* have seam tape along one edge" and "[t]he second sheet *will* have the seam at the opposite end" (emphasis added).

We appreciate the Examiner's position that Knowlton's disclosure of creating a roll of "generally uniform diameter" does not, by itself, teach away from the claimed invention. Nonetheless, we must consider Knowlton as a whole to determine whether it teaches away from the claimed invention.

Knowlton repeatedly suggests that reducing variation in thickness constitutes the principal concern when rolling membrane sheets with pre-applied seam tape. *See* Knowlton, paras. [0003], [0004], [0015], and [0016]. Knowlton discloses addressing this concern by rolling two membrane sheets in a manner such that "the two sheets do not cover the seam tape of the adjoining sheets thereby maintaining a uniform thickness across the entire sheet" (Knowlton, para. [0004]), with the result that "there will be no bulges at either edge of the roll 17" (*Id.* at para. [0016]). To accomplish this result, Knowlton discloses that "[t]he first sheet *will* have the seam tape along one edge" and "[t]he second sheet *will* have the seam at the opposite end." Knowlton, para. [0004] (emphasis added). Knowlton discloses the possibility of modifying the arrangement shown in Figure 1 only by

changing the vertical orientation of the seam tape, and only “as long as the uncoated edge 18 of sheet 12 does not overlies the seam tape coated edge 21 of sheet 16.” Knowlton, para. [0015].

In the context of Knowlton’s numerous disclosures emphasizing the importance of reducing variations in thickness, a person of ordinary skill in the art would infer from Knowlton’s admonition not to arrange the sheets with the “uncoated edge 18 of sheet 12 . . . overl[ying] the seam tape coated edge 21 of sheet 16” that one should generally avoid arranging the sheets in a manner such that a portion of one sheet overlies the seam tape applied to the other sheet. As illustrated by the arrangement of sheets suggested by the Examiner, stacking sheets with a portion of one sheet overlying the seam tape applied to the other would give the stack a triple thickness of material (two layers of sheet material and one layer of seam tape) at the point where the upper sheet overlies the seam tape applied to the lower sheet, whereas other portions of the stack would have double or single thicknesses of material. A person of ordinary skill in the art would understand that this would create a significant bulge when the stacked sheets are rolled. Knowlton’s admonition to avoid stacking a sheet overlying another sheet’s seam tape to avoid bulges would have discouraged a person of ordinary skill in the art from implementing such an arrangement. Accordingly, the preponderance of the evidence before us establishes that Knowlton teaches away from the arrangement of sheets suggested by the Examiner.

Notwithstanding this, the Examiner’s suggested arrangement of the sheets could still have been obvious based on Knowlton because:

Although a reference that teaches away is a significant factor to be considered in determining unobviousness, the nature of the teaching is highly

relevant, and must be weighed in substance. [Something that is] known or obvious . . . does not become patentable simply because it has been described as somewhat inferior to some other product for the same use.

Gurley, 27 F.3d at 553.

This caveat does not apply here, as Knowlton does not describe the Examiner's suggested arrangement of sheets as somewhat inferior. Knowlton does not describe or suggest the Examiner's suggested arrangement of the sheets at all. *See id.* at 552-553 (Where the cited prior art disclosed the possibility of implementing the disputed claim limitation but described it as somewhat inferior, the applicant's claimed invention was deemed obvious over the prior art.). Thus, in the face of Knowlton teaching away from the Examiner's suggested modification, the Examiner's independent observations of potential benefits associated with the proposed modification do not support a conclusion that the claimed invention would have been obvious based on Knowlton. In particular, Knowlton's teaching away from the claimed subject matter is more persuasive of nonobviousness than the Examiner's bare assertion that the proposed modification would have "provide[d] for easy removal of the membrane sheets when the rolls are unwound and used" is persuasive of obviousness. Nor does the Examiner's assertion regarding "a finite number of identified, predictable solutions" support such a conclusion, as the Examiner has not established that the suggested modification constitutes an identified solution. Accordingly, we cannot sustain the Examiner's rejection of independent claim 1 or of claims 2-7 depending therefrom.

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Application 11/899,261

DECISION

We reverse the Examiner's decision regarding claims 1-7.

REVERSED

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