

The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte REXFORD A. MAUGANS

Appeal No. 2006-1411
Application No. 10/013,875

ON BRIEF

Before KIMLIN, JEFFREY T. SMITH, and FRANKLIN, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1, 7-16, 18, 20-22, 50 and 52-56. Claims 19, 23-49 and 58 stand withdrawn from consideration. Claim 1 is illustrative:

1. A method of making a non-woven fabric, comprising:

passing a fiber web comprising polyethylene through a pair of rolls to obtain a thermally bonded fabric with at least about 24 percent of bond areas, and wherein the percentage of bond areas is formed by an engraved pattern on one of the rolls, and the engraved pattern has a plurality of bond points having a bond point angle higher than 20°.

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The examiner relies upon the following references as evidence of obviousness:

Hansen et al. (Hansen)	3,855,046	Dec. 17, 1974
Cumbers	4,035,219	July 12, 1977
Sawyer et al. (Sawyer)	5,672,415	Sep. 30, 1997
Shultz et al. (Shultz)	6,103,647	Aug. 15, 2000

Appellant's claimed invention is directed to a method of making a non-woven fabric. The method entails passing a fiber web of polyethylene through a pair of rollers which thermally bond the fabric. At least about 24 percent of the fabric area is bonded by an engraved pattern on one of the rolls. The engraved pattern on the roll has a plurality of bond points having a bond point angle higher than 20°.

Appealed claims 1, 7-16, 18, 50, and 52-56 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hansen in view of Cumbers, or Cumbers in view of Hansen. Claims 20-22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the stated combination of references further in view of either Sawyer or Schultz.

Appellant submits at page 4 of the principal brief that "[f]or purpose of this appeal only, the Appellant does not assert that any claim in the group under the four grounds for rejection should stand or fall separately" (last paragraph).

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Accordingly, the groups of claims separately rejected by the examiner stand or fall together.

We have thoroughly reviewed each of appellant's arguments for patentability. However, we are in complete agreement with the examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the examiner's rejections for the reasons set forth in the Answer, which we incorporate herein, and we add the following for emphasis only.

There is no dispute that Hansen, like appellant, discloses a method of making a non-woven fabric by thermally bonding the fabric with a pair of rolls, one of which has an engraved pattern thereon. Appellant also does not dispute the examiner's factual determination that Hansen teaches that about 50 percent of the fabric is thermally bonded, which meets the claimed amount of at least about 24 percent. As acknowledged by the examiner, Hansen is silent with respect to the bond point angle of the plurality of bond points for the engraved pattern on the roll. However, we concur with the examiner that Cumbers evidences the obviousness of utilizing an engraved pattern on

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the roll of Hansen having a bond point angle higher than 20°.

As explained by the examiner,

Cumbers teaches the projection angle is chosen to prevent extremely localized bonds (which occurs with angles that are to [sic, too] small) and weak peripheral region bonds (which occurs with angles that are to [sic, too] large) (Column 3, lines 20-23, 37-41, and 49-55 and Column 4, lines 20-23, 55-61, and 65-68 and Column 5, lines 1-2, 43-45, and 51) [page 5 of Answer, last sentence].

Appellant contends that "[o]n close examination, one finds a bond angle of 0 degrees suggested by illustration of the bond points in Hansen's Fig. 2" (page 5 of principal brief, penultimate paragraph). However, we agree with the examiner's assessment stated at page 12 of the Answer:

It is unclear how the top view of a bonded fabric shown in Figure 2 of Hansen et al. shows the bond areas were formed from a projection having a bond point angle of 0°. The square shaped bond area as depicted in Figure 2 of Hansen et al. would have the same topographical view no matter if formed from a square shaped projection having a bond point angle of 0° or a square shaped projection having a bond point angle of 50°.

Appellant also refers to Figs. 1 and 2 of U.S. Patent No. 3,885,045 to Brock, a contemporary of Hansen having a common assignee, for evidence of a 0 degree bond angle utilization in Hansen. We agree with the examiner, however, that "[i]t is unclear how Brock a reference (to a different inventor) not at

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all referred to in Hansen et al. is relevant to a discussion of what is disclosed by Hansen et al." (page 13 of Answer, second paragraph). As noted by the examiner, the teachings of Brock referenced by appellant are not present in Hansen. Moreover, even if, for the sake of argument, Hansen utilized the same engraved pattern of Brock, this does not undermine the obviousness of using the engraved patterns disclosed by Cumbers.

Regarding appellant's argument that Cumbers teaches away from exceeding 20 percent bond areas, we agree with the examiner that Cumbers' disclosure of bond areas "from about 1% to 20% of the total area" (column 3, lines 38 and 39), would have rendered obvious the claimed "at least about 24 percent of bond areas." It is well settled that the term "about" permits some variance. Also, notwithstanding the issue of whether about 20 percent would have suggested about 24 percent, we concur with the examiner that it would have been obvious for one of ordinary skill in the art to select the area for bonding contingent upon the amount of stiffness desired or permitted in the final article. There is apparently no dispute that the relationship between the amount of bonding and stiffness was known in the art at the time of filing the present application.

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Appellant also maintains in the principal brief that "[t]he Cumbers teaching regarding what he calls the 'projection angle' is, at best, confusing in that definition (i.e., col. 4 lines 45-47) and, at worst, is incomprehensible and therefore, non-enabling" (page 8, last paragraph). However, appellant's Reply Brief has not refuted the examiner's reasonable analysis at pages 10 and 11 of the Answer.

We are also not persuaded by appellant's argument that "Cumbers contains no indication that the teaching is relevant to the bonding of a web comprising a polyethylene fiber" (page 10 of principal brief, first paragraph). As pointed out by the examiner, Cumbers expressly teaches that "[t]he fibrous web may be composed of any conventional thermoplastic textile fibre" (column 5, lines 43-45), and Hansen, as well as appellant's specification, evidences that polyethylene was a known conventional thermoplastic textile fiber that is conducive to thermal bonding.

As a final point, we note that appellant bases no argument upon objective evidence of nonobviousness, such as unexpected results, which would serve to rebut the *prima facie* case of obviousness established by the examiner.

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In conclusion, based on the foregoing and the reasons well-stated by the examiner, the examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (effective Sep. 13, 2004; 69 Fed. Reg. 49960 (Aug. 12, 2004); 1286 Off. Gaz. Pat. Office 21 (Sep. 7, 2004)).

AFFIRMED

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
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JEFFREY T. SMITH)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
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