THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ANDREW E. HUNTOON, RANDY E. MEIROWITZ,
SRIRAM P. ANJUR, ROBERT J. PHELAN,
KIM T. TANG and ANTHONY J. WISNESKI

Appeal No. 97-4294
Application No. 08/294,155[1]

ON BRIEF

Before McCANDLISH, Senior Administrative Patent Judge, ABRAMS and NASE, Administrative Patent Judges.

NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 through 39, which are all of the claims pending in this application.

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[1] Application for patent filed August 22, 1994. According to the appellants, the application is a continuation-in-part of Application No. 08/157,802, filed November 23, 1993, now abandoned.

We REVERSE and enter new rejections pursuant to 37 CFR § 1.196(b).

BACKGROUND

The appellants' invention relates to an absorbent structure. An understanding of the invention can be derived from a reading of exemplary claim 1, which appears in the appendix to the appellants' brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Pieniak	4,560,372	Dec. 24, 1985
Jackson et al.	5,350,370	Sep. 27, 1994
(Jackson)		(filed Apr. 30, 1993)

Reference made of record by this panel of the Board is:

Bair	5,135,787	Aug. 4, 1992

Claims 1 to 39 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 the appellants regard as the invention.

Claims 1 to 12, 14 to 16, 18 to 32, 34 to 36, 38 and 39 stand rejected under 35 U.S.C. § 103 as being unpatentable over Pieniak.

Claims 13, 17, 33 and 37 stand rejected under 35 U.S.C. § 103 as being unpatentable over Pieniak in view of Jackson.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the final rejection (Paper No. 8, mailed May 10, 1996) and the examiner's answer (Paper No. 13, mailed June 23, 1997) for the examiner's complete reasoning in support of the rejections, and to the appellants' brief (Paper No. 12, filed May 12, 1997) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

The indefiniteness issue

We will not sustain the examiner's rejection of claims 1 to 39 under 35 U.S.C. § 112, second paragraph.

The second paragraph of 35 U.S.C. § 112 requires claims to set out and circumscribe a particular area with a reasonable degree of precision and particularity. In re Johnson, 558 F.2d 1008, 1015, 194 USPQ 187, 193 (CCPA 1977). In making this determination, the definiteness of the language employed in the claims must be analyzed, not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art. Id.

The examiner's focus during examination of claims for compliance with the requirement for definiteness of 35 U.S.C. § 112, second paragraph, is whether the claims meet the threshold requirements of clarity and precision, not whether more suitable language or modes of expression are available. Some latitude in the manner of expression and the aptness of terms is permitted even though the claim language is not as precise as the examiner might desire. If the scope of the invention sought to be patented cannot be determined from the language of the claims with a reasonable degree of certainty, a rejection of the claims under 35 U.S.C. § 112, second paragraph, is appropriate.

Furthermore, appellants may use functional language, alternative expressions, negative limitations, or any style of expression or format of claim which makes clear the boundaries of the subject matter for which protection is sought. As noted by the Court in In re Swinehart, 439 F.2d 210, 160 USPQ 226 (CCPA 1971), a claim may not be rejected solely because of the type of language used to define the subject matter for which patent protection is sought.

With this as background, we analyze the specific rejection under 35 U.S.C. § 112, second paragraph, made by the examiner of the claims on appeal. The examiner determined (final rejection, p. 2) that the claims were indefinite

> because the phrase "at least about 2 times . . . 240 millimeters" defines the article in terms of something other than itself, lending ambiguity as to what

> structural feature or combination of structural and material features allow these characteristics to manifest.

The appellants argue (brief, pp. 3-4) that the specification provides the required degree of clarity and particularity. We agree. The specification at page 10, lines 23-32, provides a definition of the term "otherwise substantially identical absorbent structure without any wettable staple fiber" which is used in the phrase found objectionable by the examiner. With this definition, the phrase in question makes clear the boundaries of the subject matter for which protection is sought. Thus, the examiner's rejection is improper. Accordingly, the decision of the examiner to reject claims 1 to 39 under 35 U.S.C. § 112, second paragraph, is reversed.

The obviousness issues

We will not sustain the examiner's rejection of claims 1 to 39 under 35 U.S.C. § 103.

Obviousness is established by presenting evidence that the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed combination or other modification. See In re Lintner, 9 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Furthermore, the conclusion that the claimed subject matter is obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Rejections based on § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. See In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968).

With this as background, we analyze the specific rejection under 35 U.S.C. § 103 made by the examiner of the independent claims on appeal. The examiner determined (final rejection, p. 3) that

> Pieniak discloses the material ratios of the absorbent structure substantially as claimed, however, Pieniak does not explicitly set forth liquid uptake rates in terms of the article with no wettable staple fiber.
>
> As concerns this deficiency, it would have been obvious to one of ordinary skill within the art that since the matrix of Pieniak does satisfy the broad staple fiber, binder fiber and superabsorbing polymer percentage limitations that under specific conditions the article would satisfy the uptake limitations.

The appellants argue (brief, pp. 4-6) that Pieniak does not suggest (1) wettable stable fibers, (2) wettable binder fibers, or (3) that the absorbent structure exhibits the claimed liquid uptake rate improvement.

In our opinion, the claimed subject matter would not have been obvious from the teachings of Pieniak. In that regard, Pieniak teaches that the superabsorbent is present in an amount of at least 10% by weight of a first fibrous layer, and preferably from about 20% to about 90%. The first fibrous layer also includes both wet and dry resilient fibers which are generally synthetic staple fibers such as polyethylene, polypropylene and the like. Pieniak teaches that if the fibers selected are not thermoplastic, a minor amount of thermoplastic fibers can be added to provide a binder fiber so that heat bonding can take place. From the teachings of Pieniak, it is our view that one skilled in the art would be unable to determine if the binder fibers are wettable or not. Thus, Pieniak would not have suggested the claimed wettable binder fibers. In addition, it is opinion, that while under specific conditions articles taught by Pieniak would satisfy the uptake limitations, this by itself is not sufficient to establish obviousness since there is no motivation or suggestion to make the claimed invention in light of the teachings of Pieniak.

For the above reasons, the decision of the examiner to reject claims 1 to 39 under 35 U.S.C. § 103 is reversed.[2]

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[2] The reference to Jackson was only applied by the examiner to suggest the features of dependent claims 13, 17, 33 and 37. Thus, the examiner did not rely on Jackson for any suggestion relative to the nonobvious limitations discussed

New grounds of rejection

Under the provisions of 37 CFR § 1.196(b), we enter the following new grounds of rejection under 35 U.S.C. § 102.

Anticipation by a prior art reference under 35 U.S.C. § 102 does not require either the inventive concept of the claimed subject matter or the recognition of inherent properties that may be possessed by the prior art reference. See Verdegaal Bros. Inc. v. Union Oil Co., 814 F.2d 628, 633, 2 USPQ2d 1051, 1054 (Fed. Cir.), cert. denied, 484 U.S. 827 (1987). A prior art reference anticipates the subject of a claim when the reference discloses every feature of the claimed invention, either explicitly or inherently (see Hazani v. Int'l Trade Comm'n, 126 F.3d 1473, 1477, 44 USPQ2d 1358, 1361 (Fed. Cir. 1997) and RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984)); however, the law of anticipation does not require that the reference teach what the appellants are claiming, but only that the claims on appeal "read on" something disclosed

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above.

in the reference (see Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984)).

It is well settled that the burden of establishing a prima facie case of anticipation resides with the Patent and Trademark Office (PTO). See In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). When relying upon the theory of inherency, the PTO must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. See Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Patent App. & Int. 1990).

After the PTO establishes a prima facie case of anticipation based on inherency, the burden shifts to the appellant to prove that the subject matter shown to be in the prior art does not possess the characteristics of the claimed invention. See In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985); In re King, 801 F.2d 1324, 1327, 231 USPQ 136, 138 (Fed. Cir. 1986).

For the reasons set forth below in the rejections under 35 U.S.C. § 102, it is our view that the PTO has established a prima facie case of anticipation based upon inherency. Hence, the appellants' burden before the PTO is to prove that the applied references do not perform the functions defined in the claims.

35 U.S.C. § 102(e) Rejection based on Jackson

Claims 1 to 39 are rejected under 35 U.S.C. § 102(e) as being anticipated by Jackson.

Jackson discloses a high wicking liquid absorbent composite suitable for a wide number of uses including personal care products. The composite is made from a relatively uniform mixture of from about 5 to about 20 percent fine wettable fiber, from about 3 to about 30 percent pulp fibers, from about 50 to about 90 percent superabsorbent and from 0 to about 10 percent binder, the percentages being on a dry weight basis.

Jackson teaches that the pulp fibers will most typically be a wood pulp or cellulose material such as wood pulp fibers (commonly referred to as fluff), cotton, cotton linters, bagasse or rayon fibers. In addition, synthetic counterparts to the foregoing materials are also considered to be within the scope of Jackson's invention. The fibers will have lengths in the range of about to 2 to about 10 millimeters. Examples of wood pulp fluff include CR2054 fluffing pulp produced by Kimberly-Clark Corporation of Neenab, Wis. and NB416 fluffing pulp produced by Weyerhauser Corporation of Federal Way, Washington.

Jackson discloses that the superabsorbent material is oftentimes referred to as a "hydrogel" or "hydrocolloid". Such superabsorbents are well known and produced in at least three forms including granules, fibers and flakes. Granular forms are the most common and typically have particle diameters in the range of about 50 to 1000 micrometers with liquid retention capacities in the range of 10 to 40 grams per gram of superabsorbent under a load of 0.5 pounds per square inch

(3500 pascals) using 0.9% by weight saline solution. Such materials occur naturally and may also be synthesized. Examples of natural superabsorbents or hydrocolloids include gum arabic, agar, guar gum, starches, dextran and gelatin. Semi-synthetic versions include modified celluloses such as carboxymethyl cellulose and modified starches. Examples of synthetic absorbent gelling material polymers include but are not limited to polyvinylpyrrolidone and poly-acrylates. Commercially available products include, but are not limited to, Hoechst-Celanese SANWET® IM5000 and IM3900 from Hoechst-Celanese Corporation of Charlotte, N.C.; Dow Drytech® 534 from Dow Chemical Company of Midland, Mich. and Allied Colloids SALSORB® 89 from Allied Colloids, Ltd. of Bradford, UK. Fibrous superabsorbents are also commercially available. Typically these fibers will have diameters ranging from about 10 to 50 microns and lengths ranging from about 3 to 60 millimeters. Their absorbency will typically range between about 10 and about 40 grams per gram of superabsorbent under a load of 0.5 pounds per square inch (3500 pascals) using 0.9% by weight saline solution. Commercially available superabsorbent fibers include Allied Colloids/Courtalds FSA® 101 and 111; ARCO FIBERSORB® from Arco Corporation of Philadelphia, Pa.; and TOYO BOSEKI KK Lanseal from Toyo Boseki KK of Osaka, Japan.

Jackson teaches that the fine wettable fiber is a fiber which is very small in diameter in comparison to the fibers found in the conventional fluff-based absorbent core materials and the superabsorbent fibers defined above. Typically, the fine wettable fiber will have a length less than about 2 millimeters and a fiber diameter less than about 5 microns and generally the diameter will be between about 0.5 and 2.0 microns. The fiber should either have inherent hydrophilic properties or be treated so as to have such properties. As a result, the fine wettable fiber will have an advancing contact angle less than 90° and generally less than 70° using deionized water. Hoechst Celanese cellulose acetate Fibrets® fibers from Hoechst Celanese Corporation of Charlotte, N. C. is an example of such fine wettable fibers. The Hoechst Celanese Fibrets® fibers are highly fibrillated microfibers and have lengths ranging from between 20 and 200 microns and diameters of 0.5 to 5 microns. Another fine wettable fiber is the CFF® fibrillated fiber from American Cyanamid Company of Stanford, Conn.

Jackson also teaches that the fine wettable fibers prove particularly advantageous when used in conjunction with high swell superabsorbents. Certain superabsorbents when absorbing liquids swell more than others. When such high swell superabsorbents are used in absorbent composites, they will tend to expand. As they do, the center to center spacing between the particles increases thus increasing the void volume of the total composite. If the spacing becomes too large and thus the void volume becomes too great, then the capillarity of the structure will decrease, and, as a result, the absorbent composite cannot be fully utilized. The fine wettable fibers, however, will tend to bridge the gaps between the particles and provide a path for liquid transport. Consequently, the capillarity is maintained and the liquid can be wicked to more remote areas of the absorbent.

Jackson discloses that the binder serves to hold together the components of the absorbent composite through mechanical entanglement, adhesion or both. The binder used by Jackson is binder fibers which can be relatively short staple fibers or more continuous fibers such as meltblown and spunbond fibers. Staple length fibers range in size from about 6 to 40 mm with denier sizes ranging from about 1.5 to 6 denier. Examples of staple fibers include straight or crimped single polymer staple fibers made from polyolefins, nylons or polyesters. Fusible synthetic pulps, such as PLEXAFIL® from E. I. du Pont de Nemours of Wilmington, Del., may also be used for bonding purposes but typically have fiber sizes outside the aforementioned range. Multiconstituent fibers such as bicomponent fibers also may be used. Such bicomponent fibers can provide both mechanical and adhesive bonding when heated to bond their sheaths to surrounding materials. Jackson teaches (column 8, lines 10-16) that

> suitable binder fibers are those which have a uniform polymer composition across their diameters or they may be non-uniform or even have distinct regions as with bicomponent fibers. The fibers also can have both regular and irregular-shaped cross--sections and they can

> be either hydrophilic or hydrophobic, though hydrophilic fibers are more desirable for liquid transport.

Jackson discloses the following specific examples of high wicking liquid absorbent composites.

Example 1 included 62% by weight IM5000P superabsorbent granules produced by Hoechst Celanese Corporation of Richmond, Va., 16% by weight CR2054 fluffing pulp produced by Kimberly-Clark Corporation of Neenab, Wis., 16% by weight cellulose acetate Fibrets® fibers produced by Hoechst Celanese Corporation of Charlotte, N.C. and 6% by weight generally continuous macroscopic meltblown polypropylene reinforcing fibers (i.e., binder fibers) having average diameters of approximately 15 microns.

Example 2 included the same components as Example 1, the difference being the relative weight percent of each component. The material in Example 2 comprised 80% by weight superabsorbent, 3% by weight fluffing pulp, 14% by weight cellulose acetate Fibrets® fine wettable fibers and 3% by weight polypropylene reinforcing fibers.

Example 3 included two sample materials (sample 3a and sample 3b). The sample 3a material included 75% by weight of an experimental high liquid retention/high gel strength superabsorbent produced by Dow Chemical Corporation of Midland, Mich., 19% by weight CR2054 fluffing pulp produced by Kimberly-Clark Corporation of Neenah, Wis. and 6% by weight Danaklon ES-C bicomponent polyolefin binder fibers from Danaklon
a/s of Varde, Denmark. The binder fibers were 3.3 decitex (dtex) fibers with a length of 6 mm. Sample 3b included 75% by weight superabsorbent, 14% by weight cellulose acetate Fibrets® fine wettable fibers, 6% by weight fluffing pulp and 5% by weight bicomponent polyolefin binder fibers.

Example 4 included two sample materials (sample 4a and sample 4b). The sample 4a material included 70% by weight of a developmental acrylate superabsorbent 10 decitex by 6 mm fiber labeled "FSA®-101" produced by a joint venture of

Courtaids Fibers Ltd. of Coventry, UK and Allied Colloids, Ltd. of Bradford, UK, 23% by weight Weyerhauser NB-416 fluffing pulp produced by Weyerhauser Corporation of Federal Way, Washington and 7% by weight Danaklon bicomponent polyolefin binder fiber
of the same type mentioned in the previous examples. Sample 4b used 75% by weight of the same superabsorbent fiber as sample
4a. Intimately mixed with the superabsorbent fibers was 13% by weight of the cellulosic acetate Fibrets® fine wettable fibers, 5% by weight of the fluffing pulp and 7% by weight of the Danaklon PE/PP eccentric sheath core fiber. The fine wettable
fibers, pulp and bicomponents fibers were the same as those previously mentioned in the preceding examples.

Example 5 included two sample materials (sample 5a and sample 5b). The sample 5a material included 75% by weight of the same developmental acrylate superabsorbent 10 decitex by 6 mm FSA®-101 fiber from Example 4, 20% by weight NB416 fluffing pulp produced by Weyerhauser Corporation of Federal Way, Washington and 5% by weight of the bicomponent PE/PP binder fiber mentioned in the previous examples and produced by Danaklon a/s of Varde, Denmark. Sample 5b used the same superabsorbent fibers and bicomponent fibers as sample 5a and the same cellulose acetate fine wettable fibers and fluffing pulp as used in sample 4b. Sample 5b contained 75% by weight superabsorbent fiber, 16% by weight cellulose acetate Fibrets® fine wettable fibers, 4% by weight fluffing pulp and 5% by weight bicomponent polyolefin binder fiber.

Example 6 included two sample materials (sample 6a and sample 6b). The sample 6a used the same components as sample 5a except for the length of the superabsorbent fiber which was 12 mm instead of 6 mm. The sample 6a comprised 75% by weight superabsorbent fiber, 20% by weight fluffing pulp and 5% by weight of bicomponent PE/PP binder fiber. Sample 6b used the same materials as did sample 5b. Sample 6b comprised 75% by weight superabsorbent fiber, 16% by weight fine wettable fiber,
4% by weight fluffing pulp and 5% by weight bicomponent binder fiber.

Example 7 included two sample materials (sample 7a and sample 7b). The sample 7a material included 75% by weight of a developmental acrylate superabsorbent 10 dtex by 12 mm fiber labeled "FSA®-111" produced by a joint venture of Courtaids Fibers Ltd. of Coventry, UK and Allied Colloids, Ltd. of Bradford, UK, 20% by weight CR2054 fluffing pulp from Kimberly-Clark Corporation of Neenah, Wis. and 5% by weight bicomponent polyolefin binder fiber (Danaklon ES-C 3.3 dtex by 6 mm fibers from Danakalon a/s of Varde, Denmark). Sample 7b used the same materials as sample 7a with the addition of the cellulose acetate fine wettable fibers described and used in sample 6b. Sample 7b comprised 75% by weight superabsorbent fiber, 16% by weight fine wettable fiber, 4% fluffing pulp and 5% by weight binder fiber.

A comparison of the claimed subject matter (using claim 1 as a guide) to the above teachings of Jackson reveals that Jackson does not specifically disclose that (1) the pulp fibers are wettable, (2) the binder fibers are wettable and (3) the liquid uptake rate is at least 2 times greater than the article with no wettable staple fiber.

We find that there is a reasonable basis to conclude that the pulp fibers used by Jackson (e.g., wood pulp fibers, fluffing pulp) are wettable. Jackson is silent as to whether or not his pulp fibers are wettable. However, since the appellants' disclosure (specification, p. 9) informs us that cellulosic fibers such as wood pulp fibers are wettable, it is reasonable to conclude that the pulp fibers used by Jackson (e.g., wood pulp fibers, fluffing pulp) are inherently wettable.

Additionally, we find that there is a reasonable basis to conclude that the binder fibers used by Jackson (e.g., polyolefins, nylons, polyesters, meltblown polypropylene, bicomponent polyolefin (PE/PP)) are wettable. Jackson is silent as to whether or not his binder fibers are wettable. However, since the appellants' disclosure (specification, p. 11) informs us that thermoplastic compositions such as polyethylene, polypropylene, polyesters such as polyethylene terephthalate, polyamides such as nylon, are wettable, it is reasonable to conclude that the binder fibers used by Jackson (e.g., polyolefins, nylons, polyesters, meltblown polypropylene, bicomponent polyolefin (PE/PP)) are inherently wettable.

Lastly, from the direct overlap between the claimed percentages of superabsorbent material, wettable staple fiber and wettable binder fiber and those disclosed by Jackson, we find that there is a reasonable basis to conclude that Jackson's absorbent composite would inherently exhibit a liquid uptake rate at least 2 times greater than the article with no wettable staple fiber.[3]

35 U.S.C. § 102(b) Rejection based on Bair

Claims 1, 6 to 10, 12, 13, 16, 18, 19, 21, 26 to 30, 32, 33, 36, 38 and 39 are rejected under 35 U.S.C. § 102(b) as being anticipated by Bair.

Bair discloses a liquid absorbing pad. The pad comprises superabsorbing polymer (SAP) particles distributed in a

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[3] The wettable staple fibers in Jackson can be either (1) the fine wettable fibers, (2) the pulp fibers, or (3) both the fine wettable fibers and the pulp fibers since both are wettable staple fibers.

polyester carded web contained between hydrophilic fabric outer layers. The pad can absorb more than 100 times its dry weight in water and other aqueous liquids. Bair teaches (column 2, lines 52-54) that in his pad the SAP particles generally are well distributed, do not migrate and thereby avoid gel-blocking.

Bair teaches that the superabsorbing polymer is preferably in particulate or granular form, because of the ease with such forms can be handled and dispersed in the webs with commercially available powder applicators or spreaders. Bair discloses that the polymer of the SAP particles can be selected from a wide variety of such polymers, such as those disclosed in U.S. Pat. No. 4,897,297 (Zafiroglu) column 3, lines 8-63. Preferably, the SAP polymer is a derivative of a polyacrylic acid (e.g., "Sanwet" J-400, sold by Sanyo). Suitable SAP particles for use in the present invention will absorb aqueous liquid amounting to many times its own dry weight. The SAP and absorbed aqueous liquids form a highly viscous gel which remains in place within the web. The SAP particles, prior to exposure to moisture, generally have a weight-average size of about 75 to 800 microns, preferably about 100 to 500 microns. Bair teaches that generally, the SAP particles amount to about 5 to 50 per cent by weight of the composite article, preferably about 25 to 40%.

Bair discloses that the fibrous web into which the SAP particles are dispersed can be prepared from commercially available fiber and can be assembled by carding, air-laying, or the like to form the web. The individual staple fibers of the web can have the same or different compositions, lengths and decitex. Fibers having an average length in the range of 3.5 to 10 cm are suitable. Lengths averaging in the range of 4 to 6 cm are preferred for good cotton-system carding. Bair teaches that in one embodiment of his invention, the web comprises two types of fibers, matrix fibers and binder fibers. The binder fibers have a lower melting temperature than the matrix fibers, usually by 3° to 50° C. For example, the matrix fibers can be of polyethylene terephthalate homopolymer and the binder fibers can be of an 80/20 polyethylene terephthalate/isophthalate copolymer. Bair

discloses that the binder fiber of such a web usually amounts to no more than 25% of the total weight of the web, but preferably amounts to no more than 15%. The binder fiber can be incorporated into the web conveniently, by "coforming", that is by intimately and uniformly blending matrix and binder fibers
prior to forming the web itself.

Bair discloses one example of an absorbing pad according to his invention. The absorbing pad included (1) a carded web comprising 75% of 6.5-denier (7.2-dtex), 2-inch (5.1-cm) long polyester staple fibers (KODEL 430 sold by Eastman) and 25% of 3-denier (3.3-dtex), bicomponent sheath/core (polyethylene/polyester) binder fiber (sold by BASF Corp), and (2) superabsorbent powder J-400 Grade (sold by Sanyo Corporation of America) which was applied to the web at a rate of 60 grams per square yard (72 g/m^2).

A comparison of the claimed subject matter (using claim 1 as a guide) to the above teachings of Bair reveals that Bair does not specifically disclose that (1) the matrix (i.e., staple) fibers are wettable, (2) the binder fibers are wettable and (3) the liquid uptake rate is at least 2 times greater than the article with no wettable staple fiber. The claimed percentages of superabsorbent material, staple fiber, and binder fiber is met by the specific teachings of Bair that (1) the binder fiber usually amounts to no more than 25% of the total weight of the web (i.e., the weight of both the binder fiber and the matrix (staple) fiber), and (2) the SAP particles amount to about 5 to 50 per cent by weight of the composite article.

We find that there is a reasonable basis to conclude that the matrix fibers used by Bair (e.g., polyethylene terephthalate homopolymer, polyester staple fibers (KODEL 430 sold by Eastman)) are wettable. Bair is silent as to whether or not his matrix fibers are wettable. However, since the appellants' disclosure (specification, p. 9) informs us that polyethylene terephthalate and polyesters are wettable, it is reasonable to conclude that the matrix fibers used by Bair (e.g., polyethylene terephthalate homopolymer, polyester staple fibers (KODEL 430 sold by Eastman)) are inherently wettable.

Additionally, we find that there is a reasonable basis to conclude that the binder fibers used by Bair (e.g., 80/20 polyethylene terephthalate/isophthalate copolymer, bicomponent sheath/core (polyethylene/polyester) binder fiber (sold by BASF Corp)) are wettable. Bair is silent as to whether or not his binder fibers are wettable. However, since the appellants' disclosure (specification, p. 11) informs us that thermoplastic compositions such as polyethylene and polyesters such as polyethylene terephthalate are wettable, it is reasonable to conclude that the binder fibers used by Bair (e.g., 80/20 polyethylene terephthalate/isophthalate copolymer, bicomponent sheath/core (polyethylene/polyester) binder fiber (sold by BASF Corp)) are inherently wettable.

Lastly, from the direct overlap between the claimed percentages of superabsorbent material, wettable staple fiber and wettable binder fiber and those disclosed by Bair, we find that there is a reasonable basis to conclude that Bair's absorbing pad would inherently exhibit a liquid uptake rate at least 2 times greater than the article with no wettable staple fiber.

As a final note, we leave it to the examiner to determine if any of the pending claims should be rejected under 35 U.S.C. § 103 based upon Jackson and/or Bair combined with other prior art.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1 to 39 under 35 U.S.C. § 112, second paragraph, is reversed and the decision of the examiner to reject claims 1 to 39 under 35 U.S.C. § 103 is reversed. In addition new rejections of claims 1 to 39 under 35 U.S.C. § 102 have been added pursuant to provisions of 37 CFR § 1.196(b)

This decision contains new grounds of rejection pursuant to 37 CFR § 1.196(b)(amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53131, 53197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. Office 63, 122 (Oct. 21, 1997)). 37 CFR § 1.196(b) provides that, "A new ground of rejection shall not be considered final for purposes of judicial review."

37 CFR § 1.196(b) also provides that the appellants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (§ 1.197(c)) as to the rejected claims:

> (1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .
>
> (2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

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

REVERSED; 37 CFR § 1.196(b)

HARRISON E. McCANDLISH, Senior Administrative Patent Judge	
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JEFFREY V. NASE Administrative Patent Judge	

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APPEAL NO. 97-4294 - JUDGE NASE
APPLICATION NO. 08/294,155

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DECISION: **REVERSED;**
37 CFR § 1.196(b)

Prepared By: Delores A. Lowe

DRAFT TYPED: 14 Jul 98

FINAL TYPED:

3 Member Conf.