

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

Paper No. 33

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* DEAN V. PHAN

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Appeal No. 1997-3103  
Application 08/449,647

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ON BRIEF

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Before JOHN D. SMITH, GARRIS and OWENS, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

*DECISION ON APPEAL*

This is an appeal from the examiner's final rejection of claims 3, 5, 7, 9, 11-14, 18, 20 and 21. After the final rejection, claims 20 and 21 were indicated allowable (answer, page 2, and advisory action mailed January 10, 1997, paper no. 20). The other claims in the application have been

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canceled. Thus, the claims before us are claims 3, 5, 7, 9, 11-14 and 18.

*THE INVENTION*

Appellant claims an absorbent structure which includes a fibrous capillary substrate having at least one aperture therein containing an osmotic absorbent hydrogel polymer which, upon imbibing liquids, is capable of expanding in a direction orthogonal to the substrate without constraint from the substrate. Claim 3 is illustrative:

3. An absorbent structure comprising:

a macroscopically monoplanar fibrous capillary substrate defining an X-Y plane and a Z-direction orthogonal thereto, said fibrous capillary substrate having at least one aperture; and

a freestanding site of osmotic absorbent hydrogel polymer joined to said substrate disposed in said aperture and extending in said X-Y direction, whereupon said at least one said site of freestanding osmotic absorbent hydrogel polymer is capable of expanding in the Z-direction without constraint from said substrate upon imbibing liquids.

*THE REFERENCES*

Raley 1988	4,761,322	Aug. 2,
Pigneul et al. (Pigneul) 1992	5,118,376	Jun. 2,

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*THE REJECTIONS*

The claims stand rejected as follows: claims 5, 7, 9, 11-14 and 18 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly

claim the subject matter which appellant regards as the invention; claim 12 under 35 U.S.C. § 112, fourth paragraph, as being improper dependent form for failing to further limit the subject matter of a previous claim; claims 3, 5, 7, 9, 12 and 13 under 35 U.S.C. § 102(b) as being anticipated by Pigneul; and claims 3, 5, 7, 9, 11-13 and 18 under 35 U.S.C. § 103 as being obvious over Raley in view of Pigneul.<sup>1</sup>

*OPINION*

We affirm the rejections of claims 3, 5, 7, 9 and 12

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<sup>1</sup> In the answer (pages 2 and 5) the examiner withdraws a rejection of claim 12 under 35 U.S.C. § 112, second paragraph, withdraws all rejections under 35 U.S.C. §§ 102 and 103 based on U.S. 5,281,207 to Chmielewski, and withdraws the rejection of claim 14 under 35 U.S.C. § 103 over Raley in view of Pigneul.

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under 35 U.S.C. § 102(b) and claims 3, 5, 7, 9, 11, 12 and 18 under 35 U.S.C. § 103. We reverse the rejections under 35 U.S.C. § 112, second and fourth paragraphs, and the rejections of claim 13 under 35 U.S.C. §§ 102(b) and 103.

*Rejection of claims 5, 7, 9, 11-14 and 18  
under 35 U.S.C. § 112, second paragraph*

The relevant inquiry under 35 U.S.C. § 112, second paragraph, is whether the claim language, as it would have been

interpreted by one of ordinary skill in the art in light of appellants' specification and the prior art, sets out and circumscribes a particular area with a reasonable degree of precision and particularity. See *In re Moore*, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971).

The examiner points out that claim 3 recites that the site of the hydrogel polymer is disposed in an aperture, whereas claim 7 recites that a plurality of sites of the hydrogel polymer are disposed on low density regions, and argues that it is unclear how an aperture, which has no

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density, can be a low density region (answer, page 5).

Claim 7 requires that the sites of the hydrogel polymer in the apertures are disposed on low density regions, not that the apertures themselves are low density regions. Thus, the examiner's criticism of the clarity of the claims is not well founded. The examiner has not provided the required explanation as to why the language of appellant's claims, as it would have been interpreted by one of ordinary skill in the art in light of appellant's specification and the prior art, fails to set out and circumscribe a particular area with a reasonable degree of precision and particularity.

The examiner argues that the blind holes recited in claim 12 are densified regions created by compressing and embossing a fibrous substrate and, therefore, cannot be apertures, which are openings or holes (answer, page 6). Appellant's use of "apertures" to include blind holes, the examiner argues, is repugnant to the ordinary meaning of "apertures" and, therefore, renders the claim indefinite (answer, page 9).

During patent prosecution, claims are to be given their

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broadest reasonable interpretation consistent with the specification. See *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); *In re Sneed*, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983); *In re Herz*, 537 F.2d 549, 551, 190 USPQ 461, 463 (CCPA 1976); *In re Okuzawa*, 537 F.2d 545, 548, 190 USPQ 464, 466 (CCPA 1976).

Appellant's specification (page 12, lines 28-40) defines "aperture" as being inclusive of both a through hole and a hole which extends partially through the substrate, i.e., a blind hole. One of the dictionary definitions of "aperture" is "hole", and one of the dictionary definitions of "hole" is "an opening into or through anything" (attachments to brief filed

December 17, 1996; paper no. 19½). Thus, appellant's use of the term "apertures" to include "blind holes" is consistent with the ordinary and customary meaning of the term "apertures".

For the above reasons, we reverse the rejection under 35

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U.S.C. § 112, second paragraph.

*Rejection of claim 12 under  
35 U.S.C. § 112, fourth paragraph*

The examiner argues that appellant's blind holes are densified regions formed by compressing and embossing a fibrous substrate and, therefore, do not further limit "apertures", which are openings (answer, page 6).

As discussed above, an aperture can be a hole, which is an opening into or through anything. Appellant's claim 12 limits "apertures" to openings into, but not through, the substrate, i.e., blind holes. Claim 12, therefore, further limits claim 3 from which it indirectly depends. Consequently, we reverse the rejection under 35 U.S.C. § 112, fourth paragraph.

*Prior art rejections*

Appellant separately argues only claim 13 with respect to the prior art rejections (revised brief, filed February 27, 1997, paper no. 24, pages 2 and 5). Thus, we limit our discussion to

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this claim and one of the other claims, i.e., claim 3. *See In re Ochiai*, 71 F.3d 1565, 1566 n.2, 37 USPQ2d 1127, 1129 n.2 (Fed. Cir. 1995); 37 CFR § 1.192(c)(7)(1995).

*Rejection of claims 3 and 13 under  
35 U.S.C. § 102(b) as being anticipated by Pigneul*

*Claim 3*

Pigneul discloses an absorbent structure which includes a macroscopically monoplanar fibrous capillary substrate defining an X-Y plane and a Z-direction orthogonal thereto (figure 3, item 51; col. 3, lines 39-43; col. 4, lines 62-65). The substrate has at least one blind hole aperture (figure 3, item 52; col. 4, line 66 - col. 5, line 2). A freestanding site of osmotic absorbent hydrogel polymer is joined to the substrate in an aperture, extends in the X-Y direction (figure 3, plane perpendicular to the paper), and is capable of expanding in the Z-direction (figure 3, vertical direction) without constraint from the substrate upon imbibing liquids.

Thus, Pigneul discloses each element recited in appellant's claim 3.

Appellant argues that because Pigneul pushes the hydrogel polymer particles toward the bottom of the apertures, the hydrogel polymer cannot be freestanding (revised brief, page 5). With respect to the structure recited in claim 3, however, appellant discloses that the hydrogel polymer is freestanding if it is capable of expanding in the Z-direction (specification, page 13, lines 24-30). Although, as argued by appellant (reply brief, page 2), the hydrogel polymer is at least partially set within the mass of fibers (col. 2, lines 56-60), figure 3 of Pigneul clearly indicates that the hydrogel polymer is capable of expanding in the upward Z-direction without constraint from the substrate.

Accordingly, we find that the invention recited in appellant's claim 3 is anticipated by Pigneul. We therefore affirm the rejection of this claim under 35 U.S.C. § 102(b).

*Claim 13*

Claim 13 requires that the hydrogel polymer is capable of expanding in both senses of the Z-direction without constraint from the substrate upon imbibing liquids.

The examiner argues that claim 13 merely recites a property

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of the hydrogel polymer (answer, page 3). The expansion of the hydrogel polymer recited in that claim, however, must take place in the structure in which the hydrogel polymer is present. In the Pigneul structure, the hydrogel polymer clearly is free to expand in the upward direction in figure 3. In the downward Z-direction, however, the hydrogel polymer is constrained by the padding (51). The examiner has not explained how, regardless of this constraint, the hydrogel polymer is capable of expanding in the downward Z-direction. Consequently, the examiner has not established a *prima facie* case of anticipation of the invention recited in this claim. We therefore reverse the rejection of claim 13 under 35 U.S.C. § 102(b).

*Rejection of claims 3 and 13 under 35 U.S.C. § 103  
as being obvious over Raley in view of Pigneul*

*Claim 3*

Because, as discussed above, Pigneul anticipates the invention recited in claim 3, and anticipation is the epitome of obviousness, *see In re Skoner*, 517 F.2d 947, 950, 186 USPQ 80, 83 (CCPA 1975); *In re Pearson*, 494 F.2d 1399, 1402, 181

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USPQ 641, 644 (CCPA 1974), we affirm the rejection under 35 U.S.C. § 103 over Pigneul in combination with Raley.

We also affirm this rejection for the following additional reason.

Raley discloses a fibrous layer (5) having a pattern of thermal bonds (7) through its entire thickness (figure 2; col. 8, lines 31-61).

Appellant argues that "[c]ombining Pigneul with Raley produces a two-layer fibrous structure having, at best, superabsorbent compressed into the thermal pattern bonds to set the superabsorbent (revised brief, page 5). Such a compressed superabsorbent, however, would be capable of expanding in the downward Z-direction of Raley's figure 2. Consequently, the invention recited in appellant's claim 3 would have been obvious to one of ordinary skill in the art at the time of appellant's invention over the combined teachings of Raley and Pigneul.

*Claim 13*

The examiner does not explain how combining the teachings of Raley and Pigneul would produce a structure in which the

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hydrogel polymer is capable of expanding in both senses of the Z-direction. Consequently, we reverse the rejection of claim 13 under 35 U.S.C. § 103.

*DECISION*

The rejections of claims 5, 7, 9, 11-14 and 18 under 35 U.S.C. § 112, second paragraph, and claim 12 under 35 U.S.C. § 112, fourth paragraph, are reversed. The rejections of claims 3, 5, 7, 9 and 12 under 35 U.S.C. § 102(b) over Pigneul and claims 3, 5, 7, 9, 11, 12 and 18 under 35 U.S.C. § 103 over Raley in view of Pigneul are affirmed. The rejections of claim 13 under 35 U.S.C. §§ 102(b) and 103 are reversed.

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

*AFFIRMED-IN-PART*

JOHN D. SMITH )  
Administrative Patent Judge )  
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