

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte DUANE K. ZACHARIAS, YUNG H. HUANG and FRANK GERALD

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Appeal No. 1998-2834  
Application 08/659,858<sup>1</sup>

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HEARD: January 10, 2000

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Before COHEN, STAAB and BAHR, Administrative Patent Judges.

STAAB, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's final rejection of claims 18 and 21 through 29, all the claims currently pending in the application.

As stated on page 1 of the specification, "[t]he present

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<sup>1</sup> Application for patent filed June 7, 1996. According to appellants, the application is a continuation of 08/331,072, filed October 28, 1994, now abandoned.

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invention relates to a disposable absorbent article having an adhesive disposed adjacent to a wearer's skin. More particularly, the invention relates to a catamenial device having a supportive adhesive residing on the bodyside surface of the device." Appellants maintain that

[i]t is important to the invention that the adhesive (22) have a specific  $\tan \delta$  rheological parameter. The adhesive  $\tan \delta$  resides inside the quadrangle ABCD. The quadrangle ABCD is defined by graphically plotting frequency (in radians per second) versus  $\tan \delta$  (referenced to about 20°C Centigrade). The quadrangle ABCD has as points A and D a  $\tan \delta$  of about 0.06 and 0.4 respectively at a frequency of about 0.1 radians per second and points B and C at a  $\tan \delta$  of about 0.1 and about 1.7 respectively at a frequency of about 1000 radians per second. [Brief, page 3.]

Adhesives having a  $\tan \delta$  outside the quadrangle ABCD are said to have insufficient adhesion and "quick stick" for appellants' purposes (specification, page 8).

A copy of claim 18, the sole independent claim on appeal, appears in the appendix to appellants' brief.

The prior art references of record relied upon by the examiner in support of rejections under 35 U.S.C. § 103 are:

Fischer et al (Fischer)	3,438,371	Apr. 15, 1969
Noda et al (Noda)	4,455,146	Jun. 19, 1984

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Kao KK (Japanes Loid-Open application) 6-9622 Feb. 8, 1994<sup>2</sup>

Kenney et al. "Medical-Grade Acrylic Adhesive for Skin Contact" Journal of Applied Polymer Science, vol. 45, (1992) pp. 355-361.

The following rejections under 35 U.S.C. § 103 are before us for review:

1) claims 18 and 22-27, unpatentable over Kao KK in view of Kenney;

2) claims 21 and 28, unpatentable over Kao KK in view of Kenney and further in view of Noda; and

3) claim 29, unpatentable over Kao KK in view of Kenney and further in view of Fischer.

The rejections are explained in the examiner's answer (Paper No. 20, mailed June 11, 1997).

The opposing viewpoints of appellants are set forth in the brief (Paper No. 19, filed May 14, 1997) and the reply brief (Paper No. 23, filed August 12, 1997).

*Claims 18, 23-25 and 27*

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<sup>2</sup>Translation attached

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We take up first for consideration the examiner's rejection of claim 18 as being unpatentable over Kao KK in view of Kenney.

In rejecting this claim under § 103, the examiner considers that Kao KK discloses an absorbent article generally as claimed including, a cover 2 having a bodyfacing surface and a garmentfacing surface, an absorbent core 4 adjacent the garmentfacing surface, and a pressure sensitive adhesive 5 for contacting the user's skin secured to the bodyfacing surface. The examiner implicitly concedes that Kao KK is silent as to the particulars of the adhesive. Nevertheless, the examiner considers that "it would have been obvious to one of ordinary skill in the art to select an adhesive having a tan delta in the claimed range" (answer, page 5) in view of the teachings of Kenney. In this regard, the examiner considers that Kenney discloses that "it is known in the art of retaining absorbent articles on the body that use an adhesive having the tan delta claimed is desirable" (answer, page 4).

Appellants' argument in favor of patentability is based on the tan \* limitations found in the last paragraph of claim

18. Specifically, appellants argue that

the combination of Kao KK in view of Kenney et al. would not teach or suggest [appellants'] invention. The hot melt, pressure sensitive adhesive used in Appellants' invention has a tan \*, through the respective frequencies, residing inside the quadrangle ABCD . . . . This limitation is important when the adhesive is to contact the wearer's skin and especially the sensitive pubic area. This important limitation is not taught or suggested in Kao KK alone or in combination with Kenney et al. . . . The examiner maintains that . . . it would have been obvious for one skilled in the art to select a known adhesive having the desired property for placement against the skin. However, this argument begs the question as to how would one skilled in the art would know what was the desired property or properties without referring to Appellants' disclosure. Appellants submit that without the teaching of their disclosure one skilled in the art would not recognize the importance of selecting an adhesive having the specified rheological characteristics when the adhesive is to contact skin and hair. [Brief, page 7.]

Appellants' argument is not persuasive of error on the part of the examiner in rejecting claim 18. Kenney pertains to a medical grade adhesive "for application to human skin . . . [and] utilized in making surgical tapes for holding dressings in place, adhesive bandages, adhesive dressings to cover wounds, and surgical operating drapes" (Kenney's Synopsis, page 355). On page 357 of Kenney, we are informed

that the parameter  $\tan \delta$  is defined as the ratio of  $G''$  to  $G'$ , where  $G''$  is a plastic or viscous component of shear modulus of an adhesive and  $G'$  is an elastic component of shear modulus of an adhesive. Kenney goes on to explain on page 358 that viscous characteristics determine the apparent tack on touch of an adhesive and that elastic characteristics determine the strength and integrity of an adhesive. We are informed by Kenney that a good pressure sensitive adhesive for application to human skin "must have a balance of viscoelastic properties. This balance would include sufficient flow to enable the adhesive to form a bond with skin. Also, it must have internal integrity to maintain the bond" (Kenney, page 358). Kenney's Table VIII on page 359 lists  $\tan \delta$  as a function of frequency for a particular adhesive and includes several combinations of  $\tan \delta$  and frequency (referred at 36" Centigrade) that lie within the claimed quadrangle ABCD.<sup>3</sup> Kenney teaches (pages 360-61) that the cohesive strength, tackiness and ease of removal properties of an adhesive vary depending on its  $\tan \delta$ , and that the selection of a suitable

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<sup>3</sup> In this regard, claim 18 does not specify the reference temperature of  $\tan \delta$ .

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adhesive for a particular skin contact application involves a balancing of these properties.

Given the above teachings of Kenney relating to adhesives for application to human skin, we are of the opinion that Kenney would have suggested the use of an adhesive having a tan \* as called for in claim 18 for the absorbent article of Kao, such that the subject matter of claim 18 as a whole would have been obvious to one of ordinary skill in the art at the time of the invention. Accordingly, appellants' argument that only their disclosure teaches the importance of selecting an adhesive having the specified rheological characteristics when the adhesive is to

contact human skin and hair, and that "[t]he prior art did not appreciate the source of the problem for a comfortable adhesive or recognize the solution" (brief, page 8), are not well taken.

In the paragraph spanning pages 7 and 8 of the brief, appellants argue that it would not have been obvious to use an

adhesive having a rheology ( $\tan \delta$ ) that resides inside the quadrangle as claimed because appellants' specification on page 12 indicates that three adhesives having a  $\tan \delta$  greater than 0.6 at a frequency of 100 to 1000 radians per second, as taught by Kenney, were tested and found to be unsatisfactory. This argument is not persuasive for at least two reasons. First, the argument is not commensurate in scope with claim 18 because that claim does not preclude adhesives having a  $\tan \delta$  greater than 0.6 at a frequency of 100 to 1000 radians per second. Second, the argument fails to address the circumstance that Kenney discloses adhesives having, for example,  $\tan \delta$ s at other frequencies that are well within the quadrangle as claimed.<sup>4</sup>

In light of the foregoing, the standing § 103 rejection of claim 18 as being unpatentable over Kao KK in view of Kenney is sustained. In that dependent claims 23-25 and 27 have not been

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<sup>4</sup>For example, see Kenney's Table VIII for an adhesive having a  $\tan \delta$  of 0.5 to 0.6 at a frequency of 10 radians per second.

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separately argued apart from base claim 18, the standing § 103 rejection thereof as being unpatentable over Kao KK in view of Kenney also is sustained.

*Claims 22 and 26*

Claim 22 depends from claim 18 and states that the adhesive has a primary transition frequency peak greater than about 1000 radians per second. Claim 26 depends from claim 22 and adds that the adhesive has a secondary peak between a frequency range of about 0.1 and about 1000 radians per second. Appellants' specification (page 8, lines 23-26) indicates that adhesives having these properties are "especially preferred."

In rejecting these claims as being unpatentable over Kao KK in view of Kenney, the examiner acknowledges (answer, page 4) that the applied references are silent as to these claim limitations. Nevertheless, the examiner has taken the position (answer, page 4) that

[b]ecause the Patent Office does not have facilities for testing materials discussed in the art to determine all the properties thereof, and given that Applicant is not alleging that his adhesive is novel, it appears that Applicant has merely selected a known adhesive having a desirable transition

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frequency peak for placement against and removal from the skin. Therefore, it is the Examiner's position that it would have been obvious to one of ordinary skill in the art to do the same.

Legal conclusions of obviousness must be supported by facts. *In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967). An examiner has the initial burden of supplying the requisite factual basis and may not, because of doubts that the claimed invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in the factual basis. *Id.*

In the present case, the examiner has failed to advance any factual basis to support his conclusion that it would have been obvious to one of ordinary skill in the art to select an adhesive for the modified Kao KK absorbent article that would have the properties called for in claims 22 and 26. In essence, the examiner's conclusion of obviousness is based on nothing more than pure speculation. Accordingly, the standing rejection of claims 22 and 26 as being unpatentable over Kao KK in view of Kenney cannot be sustained.

*Claims 21 and 28*

These claims depends from claim 18 and add details

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thereto concerning the composition of the adhesive. In rejecting these claims, the examiner asserts (answer, page 5) that Noda teaches that the claimed adhesive material is old and well known for use

in removably retaining plasters on the body, thereby making its selection in the removably retained article of Kao KK obvious.

We do not agree. The disclosure of Noda is directed to a "plaster" comprising a block copolymer elastomer as the base material of the "plaster" and having, inter alia, a medicinal ingredient dissolved therein. It appears that Noda's "plaster" is intended to be used as a sort of medicinal delivery device wherein the "plaster" is applied to a patient's skin so that the medicinal ingredient may be discharged onto or through the patient's skin. See column 1, line 56 through column 2, line 4.

Based on our reading of Noda, it is our view that Noda's teaching of a medicinal "plaster" comprising a block copolymer

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elastomer as the base material thereof is too remote from the absorbent article of Kao KK and the skin contacting adhesive of Kenney to suggest their combination in a manner that would result in the subject matter of claims 21 and 28. Stated differently, it appears that it is only through the hindsight knowledge gleaned from first reading appellants' disclosure that one would have brought together the applied references in the manner proposed by the examiner. It follows that we will not sustain the standing rejection of claims 21 and 28 as being unpatentable over Kao KK in view of Kenney and Noda.

*Claim 29*

Claim 29 depends from claim 18 and calls for the adhesive to be in the form of discrete elements. Claim 29 further specifies the surface area and thickness of such discrete adhesive elements. The examiner relies on Fischer for a teaching of discrete elements of adhesive and concludes that the subject matter of claim 29 would have been obvious. Appellants admit that "but for claim 29 depending from claim 18, such discrete elements would be obvious in view of the

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teachings of Fischer et al." (brief, sentence spanning pages 10-11). Thus, it is clear that appellants do not separately argue the patentability of claim 29 apart from claim 18. Under these circumstances, the standing § 103 rejection of claim 29 also will be sustained.

*Summary*

The rejection of claims 18 and 22-27 as being unpatentable over Kao KK in view of Kenney is affirmed as to claims 18, 23-25 and 27, but is reversed as to claims 22 and 26.

The rejection of claims 21 and 28 as being unpatentable over Kao KK in view of Kenney and further in view of Noda is reversed.

The rejection of claim 29 as being unpatentable over Kao KK in view of Kenney and further in view of Fischer is affirmed.

The decision of the examiner is affirmed-in-part.

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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*

IRWIN CHARLES COHEN	)	
Administrative Patent Judge	)	
	)	
	)	BOARD OF PATENT
LAWRENCE J. STAAB	)	
Administrative Patent Judge	)	APPEALS AND
	)	
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