

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(2) is not binding precedent of the Board.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. 33

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TED Y. TSAI

Appeal No. 1996-2350
Application No. 07/843,833

HEARD: April 07, 2000

Before JOHN D. SMITH, PAK and KRATZ, ***Administrative Patent
Judges.***

KRATZ, ***Administrative Patent Judge.***

DECISION ON APPEAL

This is a decision on appeal from the examiner's
refusal to allow claims 1 through 6, which are all of the
claims pending in this application.

BACKGROUND

Appellant's invention relates to a method of treating unbleached pulp derived from a Kraft digestion process. In an initial chlorine free bleaching stage, the pulp is contacted with a pressurized mixture of ozone and oxygen in a mixer at pH and temperature conditions that allow for the ozone to react with components of the pulp but not the oxygen. After essentially all of the ozone is consumed by reaction with pulp components, the pH and temperature are altered so that the oxygen from the initially supplied mixture of ozone and oxygen reacts with the pulp components. Subsequent to a following water washing step, the washed and so treated pulp is subjected to another round of contacting with an ozone and oxygen mixture and the reaction steps as set forth above. Exemplary claim 1, the sole independent claim on appeal, is reproduced below.

1. In the treatment of kraft pulp comprising wood fibers to render the pulp useful in end use applications requiring a pulp viscosity of at least about 10 cP and a P. No. of at least about 9 and wherein said pulp has been digested employing a kraft process, the improvement comprising a two-phase post-digestion treatment, including contacting, in

a mixer, the digested, unbleached pulp at a low alkaline pH with a mixture of ozone and oxygen pressurized to between about 60 psig and about 100 psig in an initial, chlorine free bleaching stage, said ozone in said mixture being present in an amount of between about 0.15% and 0.5%, based on the dry weight of the pulp, and wherein the temperature of said pulp in said mixer is maintained below the temperature at which oxygen will react with the components of

said pulp and at or above the temperature at which said ozone will react with components of said pulp so that essentially all of said ozone in said mixture is consumed by reaction with the components of said pulp while a substantial portion of said oxygen in said mixture remains unreacted in said pulp, and thereafter altering the pH of said pulp to an alkaline pH and increasing the temperature of said pulp containing said oxygen to a temperature at which the oxygen in said pulp will react with components of said pulp for a period of time sufficient for said oxygen to react with said pulp components, thereafter subjecting said pulp to a conventional water washing step, and after said washing step, subjecting the washed pulp to a further second phase including repeating the aforesaid procedure employing the washed pulp and further ozone/oxygen mixture.

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

Phillips et al. (Phillips)	4,372,812	Feb. 08, 1983
Tsai (Tsai '124)	4,959,124	Sep. 25, 1990
Schwarzl	5,133,946	Jul. 28, 1992

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Singh, The Bleaching of Pulp, pages 578-580,¹ Tappi Press,
Atlanta, 1979.

The examiner additionally relies on the following
listed patent in a rejection based on the judicially created
doctrine of obviousness-type double patenting:

Tsai (Tsai '201) ²	5,389,201	Feb. 14,
1995		

Claims 1-6 stand rejected under 35 U.S.C. § 103 as
being unpatentable over Tsai '124 in view of Singh, Phillips
and Schwarzl. Claims 1-6 stand rejected under the judicially

¹ Pages 578-580 were the only pages of the Singh reference
found of record. The examiner specifically refers to page 579
of Singh in the stated rejection under review (answer, page
4). Accordingly, our consideration of the § 103 rejection
utilizing the Singh reference as part of the evidence of
obviousness is limited to the above-noted pages 578-580 of
Singh in combination with the other evidence relied upon by
the examiner.

² We note that the examiner does not separately list this
patent on a Notice of References Cited (Form PTO-892) of
record.

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created doctrine of obviousness-type double patenting as being unpatentable over all of the claims of Tsai '201.

OPINION

We have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. In so doing, we find ourselves in agreement with appellant that the applied prior art fails to establish *prima facie* obviousness of the claimed subject matter. Accordingly, we will not sustain the examiner's § 103 rejection. However, we shall summarily sustain the examiner's obviousness-type double patenting rejection. We add the following primarily for emphasis.

We begin with the examiner's § 103 rejection.

The examiner acknowledges that Tsai '124 includes a chlorine containing bleaching agent (chlorine dioxide) in the

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disclosed bleaching steps disclosed therein, including the Example 57 sequence that is specifically relied upon for allegedly teaching the claimed ozone bleaching and oxygen extraction (answer, pages 3-7). We note that the stated § 103 rejection is founded, at least in part, on the examiner's opinion that the herein claimed limitation of an ". . . initial, chlorine free bleaching stage . . ." (claim 1) does not exclude the use of chlorine dioxide in an initial bleaching step as disclosed by Tsai '124 (answer, page 7 and supplemental answer, page 2). Appellant, on the other hand, is of the opinion that the above-noted claim language does exclude the use of chlorine dioxide, as taught by Tsai '124, for use in a first or initial bleaching stage (brief, pages 11-13 and reply brief, pages 1-3).

The initial inquiry into the examiner's obviousness analysis is to correctly determine the scope and meaning of each contested limitation. **See *Gechter v. Davidson***, 116 F.3d 1454, 1457, 1460 n.3, 43 USPQ2d 1030, 1032, 1035 n.3 (Fed. Cir. 1997).

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Accordingly, we must construe the scope and meaning of the contested limitation ". . . initial, chlorine free bleaching stage" Our reviewing court has stated:³

[T]he PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification.

As noted by appellant on page 2 of the reply brief, the specification states:⁴

It is a further object to provide a post-digestion treatment for kraft cellulosic pulps in which there is no chlorine containing bleaching agent employed in the treatment.

In our view, the written description in appellant's specification (pages 1 and 2) sets forth what is meant by

³ *In re Morris*, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997).

⁴ Specification, page 2, lines 3-5.

chlorine free in a manner that would be understood by one of ordinary skill in the art⁵ as excluding chlorine whether as an element, molecule, or part of a compound. Hence, chlorine dioxide is clearly a bleaching chemical excluded by the claim language "chlorine free."

In view of this claim construction, we determine that the applied prior art on this record fails to disclose, suggest or teach the specific bleaching sequence as recited in claim 1 on appeal. We note that while the secondary references relied upon by the examiner are directed to chlorine free bleaching of pulp, the examiner has not adequately explained how the collective teachings of these references would have remedied the deficiency of Tsai '124, as noted above, and suggested the specific bleaching sequence claimed herein to one of ordinary skill in the art.

⁵ We observe that the applied and commonly assigned Phillips patent uses terms such as "non-chlorine" (column 2, lines 59-66 and column 3, lines 29-32) and "chlorine-free" (column 4, lines 15 and 16) in a manner that is consistent with appellant's use of the term "chlorine free" as evidenced by a comparison of columns 1-4 of Phillips and columns 1 and 2 of appellant's specification.

Consequently, for the reasons set forth by appellant in the briefs and as further explained above, we shall not sustain the examiner's § 103 rejection of claims 1-6.⁶

Turning to the examiner's obviousness-type double patenting rejection of appealed claims 1-6, we observe that appellant asserts that a terminal disclaimer has been proffered and that ". . . this rejection is not, in fact, an issue" (brief, page 17). However, the mere offer to furnish a terminal disclaimer, as opposed to the actual filing of an acceptable terminal disclaimer, is not effective to overcome the stated rejection. Moreover, appellant has not furnished a substantive argument specifically alleging any errors that appellant may have considered to be present in the examiner's obviousness-type double patenting rejection.

⁶ We note that dependent claims 2-6 include the above-discussed limitations of claim 1 by virtue of their dependency thereon. Accordingly, like the § 103 rejection of claim 1, the examiner's § 103 rejection of these claims cannot be sustained.

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On this record, we determine that a summary affirmance of the obviousness-type double patenting rejection of claims 1-6⁷ is in order.

CONCLUSION

The decision of the examiner to reject claims 1-6 under 35 U.S.C. § 103 as unpatentable over Tsai '124 in view of Singh, Phillips and Schwarzl is reversed. The decision of the examiner to reject claims 1-6 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over all of the claims of Tsai '201 is affirmed.

⁷ We note that appellant has not furnished separate arguments regarding the dependent claims 2-6 with respect to this rejection. Accordingly, the patentability of these claims falls with the patentability of claim 1 with respect to this rejection.

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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

JOHN D. SMITH)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
CHUNG K. PAK)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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PETER F. KRATZ)	
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