

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THOMAS C. FALLON

Appeal No. 94-3028
Application 07/818,033¹

ON BRIEF

MAILED

JUN 27 1996

**PAT.&T.M. OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES**

Before KIMLIN, ELLIS and WARREN, *Administrative Patent Judges*.

KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-20, all the claims remaining in the present application.

Claim 1 is illustrative:

1. A process in which paper or paperboard is made by forming an aqueous cellulosic slurry, draining said slurry on a screen to form a sheet and drying said sheet, characterized in that a cationic polymer having a quaternary ammonium salt cationic charge density of at least about 3.2 equivalents of cationic nitrogen per kilogram of dry polymer and having an Intrinsic Viscosity of at least about 8 dl/g is added to said

¹ Application for patent filed January 8, 1992.

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slurry after the last high shear stage and prior to said draining of said slurry in an amount effective to provide at least about a 50 percent increase in retention wherein said increase in retention is obtained without more than about a 10 percent decrease in formation index as measured by digital image analysis on an index of from about 20 to about 120.

In the rejection of the appealed claims, the examiner relies upon the following reference:

WO 89/10447

Nov. 02, 1989

Appellant's claimed invention is directed to a process for making paper or paperboard which achieves at least about a 50 percent increase in retention without more than about a 10 percent decrease in formation. The process entails adding to a conventional aqueous cellulosic slurry, after the last high shear stage and prior to draining the slurry, a cationic polymer having a quaternary ammonium salt cationic charge density of at least about 3.2 equivalents of cationic nitrogen per kilogram of dry polymer.

Appealed claims 1-20 stand rejected under 35 USC 102 or, in the alternative, under 35 USC 103 as being unpatentable over WO '447.

We have carefully reviewed the respective positions advanced by appellant and the examiner. In so doing, we find ourselves in agreement with appellant that the claimed process is neither anticipated nor rendered obvious by the cited prior art

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within the meaning of § 102 and § 103, respectively.

Accordingly, we will not sustain the examiner's rejection.

There is apparently no dispute that WO '447 suggests the addition of the claimed cationic polymers to the aqueous cellulosic slurry of a papermaking process. However, inasmuch as the reference expressly teaches that the disclosed invention is contrary to all conventional thinking about retention and formation of paper (page 7, lines 29-31), which convention includes mixing the retention aid into the slurry after the last point of high shear (page 2, line 17 et seq.), and involves the attainment of good formation and good retention upon shearing the high molecular weight cationic polymer, we cannot conclude that it would have been obvious for one of ordinary skill in the art to incorporate appellant's cationic polymer after the last high shear stage, as claimed. While page 7 of the reference teaches the relationship between molecular weight of the polymer and the degree of shear required, with moderately high molecular weight polymers associated with moderate degrees of shear, it cannot be gainsaid that the reference process requires a high shear stage after addition of the polymer.

It is the examiner's position that WO '447 adds the cationic polymer prior to sheeting out the slurry, which is the same point of addition presently claimed, i.e., after the last

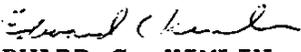
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shear stage. However, the reference teaches that the cationic polymer-containing slurry is applicable for machines being operated at high screen speed, typically 800 meters per minute or higher, which screen speeds impart shear on the slurry during drainage. The point of the reference invention is to provide a slurry that permits the application of shear such that it can be used on modern very high speed machines (page 5, line 11 et seq.). Accordingly, since it is known in the art that screen speeds of 800 meters per minute and higher impart shear to the slurry, we must interpret the appealed claims, which require addition of the polymer after the last high shear stage, to encompass only processes which have screen speeds sufficiently low to not shear the slurry, i.e., lower than 800 meters per minute.

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In conclusion, based on the forgoing, the Examiner's
decision rejecting the appealed claims is reversed.

REVERSED


EDWARD C. KIMLIN)
Administrative Patent Judge)

JOAN ELLIS)
Administrative Patent Judge)


CHARLES F. WARREN)
Administrative Patent Judge)

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