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FELTON, MICHAEL J

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL
AND APPEAL BOARD

Ex parte PING LI, MOHAMMAD HAJALIGOL, EUN-JAE, SHIN,
and FIROOZ RASOULI

Appeal 2011-004475
Application 11/471,721
Technology Center 1700

Before CHUNG K. PAK, CATHERINE Q. TIMM, and
BEVERLY A. FRANKLIN, *Administrative Patent Judges*.

PER CURIAM

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from the Examiner's rejection of claims 27 to 34. We have jurisdiction under 35 U.S.C. § 6.

STATEMENT OF THE CASE

Claims 27, 28, and 32 are representative of the subject matter on appeal and are set forth below:

27. A method of treating mainstream tobacco smoke *comprising*: lighting *a cigarette comprising* a cut filler composition and at least one

nanosized catalyst to form smoke and drawing mainstream smoke through the cigarette, wherein the nanosized catalyst is capable of (a) converting isoprene and/or catechol to carbon dioxide and water vapor, and (b) converting at least one aldehyde, hydrocarbon and/or phenolic compound to carbon dioxide and water vapor, and wherein the nanosized catalyst consists of at least one of metal oxides, doped metal oxides, and mixtures thereof.

28. The method of claim 27, wherein the nanosized catalyst also reduces at least one additional tobacco smoke constituent comprising nitrogen oxide.

32. The method of claim 27, wherein the nanosized catalyst consists of iron oxide nanoparticles supported on 2 to 3 μm AI_20_3. [(Emphasis added.)]

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Bereman	US 6,789,548 B2	Sep. 14, 2004
Rasouli	WO 2004/110189 A2	Dec. 23, 2004

THE REJECTIONS

1. Claims 27 to 31, 33, and 34 are rejected under 35 U.S.C. §102 as being anticipated by Bereman.

2. Claim 32 is rejected under 35 U.S.C. §103(a) as being obvious over Bereman in view of Rasouli.

ANALYSIS

We affirm the above rejections based on the findings of fact, conclusions of law, and arguments expressed by the Examiner in the Answer.

We add that Bereman teaches a nanosized catalyst consisting of a micron-sized metal oxide. Bereman discloses a catalyst **system** [emphasis added] that includes a nanosized catalyst and a nitrite source, which need not be combined with one another because each can be introduced into a cigarette separately. *See, e.g.*, Bereman, col. 10. ll. 50-67. Claim 27 recites that the nanocatalyst consists of at least one of metal oxides, doped metal oxides, and mixtures thereof. The claims do not exclude non-nanosized catalysts or other components, as is apparent from the transitional phrase "comprising" in claim 27, and from no other limitation indicating that the only catalyst present in the cigarette is a nanosized catalyst. *In re Baxter*, 656 F.2d 679, 686-87 (CCPA 1981) ("As long as one of the monomers in the reaction is [claimed] propylene, any other monomer may be present, because the term 'comprises' permits the *inclusion* of other steps, elements, or materials.") The claims only limit the nanosized catalyst employed.

The decision of the Examiner is affirmed.

AFFIRMED

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