The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ALAN D. WILLEY
and
MICHAEL E. BURNS

Appeal No. 1997-3738
Application No. 08/469,741

ON BRIEF

Before CAROFF, KIMLIN, and GARRIS, Administrative Patent Judges.

CAROFF, Administrative Patent Judge.

DECISION ON APPEAL

This decision on appeal relates to the final rejection of claims 4-14 and 27-31, all the pending claims in appellants' application.

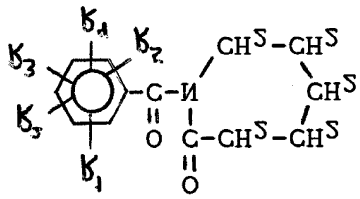
The appealed claims are directed to a laundry bleach composition which includes a peroxygen compound and a

substituted benzoyl caprolactam (BCL) as a bleach activator or precursor. According to appellants' specification, the peroxygen compound and the bleach activator react <u>in situ</u> to form the corresponding peroxycarboxylic acid, i.e., a substituted peroxybenzoic acid.

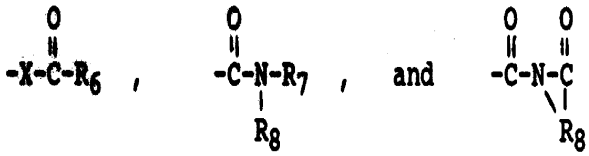
Claim 4 is representative:

4. A laundry bleaching system comprising:

i) at least about 0.1% by weight of a peroxygen bleaching compound; and



ii) at least about 0.1% by weight of a substituted benzoyl caprolactam bleach activator having the formula:



wherein R^1, R^2, R^3, R^4 and R^5 are members selected from the group consisting of H, halogen, NO_2, alkyl, alkoxy, alkoxyaryl, alkaryl, alkaryloxy, and substituents having the structure:

wherein R_6 is selected from the group consisting of H, alkyl, alkaryl, alkoxy, alkoxyaryl, alkaryloxy, and aminoalkyl; X is O, NH, or NR_7, wherein R_7 is H or a C_1-C_4 alkyl group; and R_8 is an alkyl, cycloalkyl, or aryl group containing from 3 to 11 carbon atoms; provided that at least one R substituent is not H.

The following references are relied upon by the examiner as evidence of obviousness:

Brocklehurst et al. (Brocklehurst)	3,075,921	Jan. 29, 1963
Gray	3,637,339	Jan. 25, 1972
Castrantas et al. (Castrantas)	4,013,575	Mar. 22, 1977
Cottrell et al. (Cottrell)	4,299,716	Nov. 10, 1981

All of the appealed claims stand rejected under 35 U.S.C. § 103 for obviousness in view of Castrantas taken with Brocklehurst and Gray.[1] With regard to claim 14, the examiner additionally relies upon Cottrell.[2]

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[1]Although the examiner's rejection refers to claims 4-17 and 27-31, we note that only claims 4-14 and 27-31 are pending; claims 15-17 have been previously canceled.

[2]A previous rejection under 35 U.S.C. § 112, first paragraph, has been expressly withdrawn in the Examiner's

Based upon the record before us, we agree with appellants that the examiner has failed to establish a prima facie case of obviousness. Accordingly, we reverse the rejections at issue.

We would agree with the examiner, appellants' arguments to the contrary notwithstanding, that it would have been prima facie obvious within the context of 35 U.S.C. § 103 to use the substituted peroxybenzoic acids of Brocklehurst in place of the unsubstituted perbenzoic acid of Castrantas to obtain the benefits suggested by Brocklehurst (Table I). We would even agree with the examiner that it would have been prima facie obvious, in the alternative, to combine a peroxygen compound with a suitable bleach activator containing a substituted benzoyl moiety to obtain the corresponding peroxybenzoic acid in situ, as suggested by Castrantas (col. 3, l. 11-14, 61-4).

However, the examiner has not adequately explained why it would have been obvious to those of ordinary skill in the art to use a substituted BCL, in particular, as such an activator.

Answer.

Certainly, it might have been obvious to try to do so in view of the disclosure in Castrantas (col. 4, l. 36) of an unsubstituted BCL as a suitable activator. But, "obvious-to-try" is not the standard for determining obviousness under 35 U.S.C. § 103.

The examiner refers to the Burns et al. patent 4,852,989 to support his position.[3] If anything, though, Burns undermines the examiner's position. Burns (col. 3, l. 55-col. 4, l. 16) indicates that a number of factors are involved in selecting a suitable leaving group to form a stable bleach activator.

[3]The Burns patent is discussed on page 6 of the Examiner's Answer, although it was not included in the examiner's statement of the grounds for rejection.

Significantly, caprolactams are not even mentioned as suitable leaving groups among many specific leaving groups which are disclosed.

Moreover, Burns appears to teach away from using caprolactams as leaving groups by suggesting that the pKa value of the conjugate acid of the leaving group should be in the range of about 4 through 13 (see Burns at col. 4, l. 9-16). The examiner does not refute appellants' assertion that the conjugate acid of caprolactam has a pKa of above 14, which is outside the pKa range generally considered suitable for a leaving group according to Burns.

In view of the foregoing, we find it unnecessary to discuss the other references cited by the examiner (Gray and Cottrell) since they do not provide the requisite motivation lacking in the combination of Castrantas with Brocklehurst.

For the foregoing reasons, the decision of the examiner is reversed.

REVERSED

MARC L. CAROFF Administrative Patent Judge	)	
EDWARD C. KIMLIN Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
BRADLEY R. GARRIS Administrative Patent Judge	)	

MLC:hh

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