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AUG 15 1996

PAT.&T.M. OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES
THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

This opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DONALD G. BAIRD
and ARINDAM DATTA

Appeal No. 94-0975
Application No. 07/686,603¹

HEARD:
July 9, 1996

Before KIMLIN, GARRIS, and OWENS, *Administrative Patent Judges*.
KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-15, all the claims in the present application. Claim 1 is illustrative:

¹ Application for patent filed April 17, 1991.

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Claim 1. A polymer alloy or blend comprising a polyolefin, a maleated polyolefin, and a liquid crystal polymer copolyester or polyester (coamides).

The examiner relies upon the following references as evidence of obviousness:

Takayanagi et al. (Takayanagi)	4,228,218	Oct. 14, 1980
Newton et al. (Newton)	4,368,295	Jan. 11, 1983
Tsuruta et al. (Tsuruta)	5,043,400	Aug. 27, 1991

European Patent Application (EP '655) 0 340 655 Nov. 8, 1989

Gaylord, "Compatibilizing Agents: Structure and Function in Polyblends," J. Macromol. Sci. -Chem., pp. 1211-1229 (1989).

Appellants' claimed invention is directed to a polymeric blend of a polyolefin and a liquid crystal polymer copolyester or polyester (coamide), wherein a maleated polyolefin is present as a compatibilizing agent.

Appealed claims 1-15 stand rejected under 35 U.S.C. § 103 as being unpatentable over EP '655 in view of Newton, Gaylord, Takayanagi and Tsuruta.

We have carefully reviewed the respective positions advanced by appellants and the examiner. In so doing, we find that the prior art applied by the examiner fails to establish a *prima facie* case of obviousness for the claimed subject matter. Accordingly, we will not sustain the examiner's rejection.

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The examiner correctly points out that EP '655, Takayanagi and Tsuruta disclose blends of liquid crystal polymers in a polyolefin matrix, and it is acknowledged in appellants' specification that compatibility between liquid crystal polymers and polyolefins is a known problem in the art. Since such compatibility is a known problem, and the present specification as well as the prior art evidences that the use of compatibilizing agents is well-known in the art to effect blends of incompatible polymers, the examiner concludes that it would have been obvious for one of ordinary skill in the art to employ a known compatibilizing agent, such as the claimed maleated polyolefin, in order to effect a blend of known incompatible polymers such as polyolefins and a liquid crystal polymer. However, while we appreciate the logic in the examiner's position, the legal flaw in the examiner's conclusion is that there is no teaching or suggestion in the prior art, related to blends of liquid crystal polymers, that the use of a compatibilizing agent, in general, let alone the specifically claimed maleated polyolefin, is a solution to the problem. As noted by appellants, the solution of EP '655 is to inject a stream of molten liquid crystal polymer into molten polypropylene at a location near the outlet of the extruder. The solution

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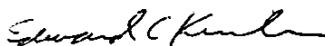
offered by Takayanagi is to carry out a microscopic uniform dispersion by mere physical mixing for several combinations of rigid liquid crystal molecules and matrix polymers (column 5, lines 11-37). Tsuruta effects a uniform dispersion in a matrix resin by employing liquid crystal polymers in powder form within a certain particle size range (column 2, lines 21-30).

Consequently, since all the references applied by the examiner directed to a uniform dispersion of a liquid crystal polymer in a polymeric matrix utilize means other than compatibilizing agents, and none of these references even mention the use of a compatibilizing agent, in general, we find no factual basis to support the legal conclusion that the claimed composition would have been obvious to one of ordinary skill in the art. In our view, at best, it would only have been obvious for the skilled artisan to try a maleated polyolefin in order to blend a polyolefin and a liquid crystal polymer copolyester or polyester (coamide).

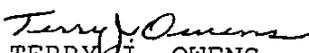
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In conclusion, based on the foregoing, the examiner's
decision rejecting the appealed claims is reversed.

REVERSED


EDWARD C. KIMLIN)
Administrative Patent Judge)


BRADLEY R. GARRIS) BOARD OF PATENT
Administrative Patent Judge) APPEALS AND
INTERFERENCES


TERRY J. OWENS)
Administrative Patent Judge)

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