

The opinion in support of the decision being entered today
is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RONALD EARL USCHOLD

Appeal 2007-1901
Application 10/095,922
Technology Center 1700

Decided: August 28, 2007

Before BRADLEY R. GARRIS, CATHERINE Q. TIMM, and
JEFFREY T. SMITH, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from a final rejection of claims 1-3, 5 and 7-9. We have jurisdiction under 35 U.S.C. § 6.

Claim 1 is illustrative:

1. A process for preparing an interpolymer comprising polymerizing, in an emulsion polymerization process, vinyl fluoride and at least one highly fluorinated monomer in water with a water soluble free-radical initiator at a temperature in the range of 60 to 100°C. and a pressure in the range of 1 to 12 MPa, said vinyl fluoride

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and said at least one highly fluorinated monomer being employed in amounts which produce an interpolymer comprising polymer units derived from 10-90 mol% vinyl fluoride and 90-10 mol% of at least one highly fluorinated monomer, said polymerizing being carried out in a horizontal autoclave.

The Examiner relies upon the following references:

James	US 3,129,207	Apr. 14, 1964
Cook	US 3,428,618	Feb. 18, 1969
Barber	US 4,569,978	Feb. 11, 1986
Effenberger	US 4,883,716	Nov. 28, 1989
Uschold	US 5,229,480	Jul. 20, 1993
Froggatt	US 5,308,685	May 3, 1994
Farnham	US 5,639,837	Jun. 17, 1997
Feiring	US 5,763,552	Jun. 9, 1998

Appellant's claimed invention is directed to an emulsion polymerization process for preparing an interpolymer comprising vinyl fluoride and at least one highly fluorinated monomer.

Appealed claims 1-3, 5 and 7-9 stand rejected as unpatentable under 35 U.S.C. § 103(a) over:

- (i) James,
- (ii) Cook, or
- (iii) Uschold '480 taken with Effenberger or Froggatt,
and further in view of Barber, Feiring, or Farnham.

Appellant has not separately argued any particular claim.
Accordingly, all of the claims, as separately rejected, stand or fall together.

We have thoroughly reviewed each of Appellant's arguments for patentability. However, we are in full agreement with the Examiner that the claimed subject matter is unpatentable over the cited prior art. Accordingly,

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we will sustain the Examiner's rejections for the reasons set forth in the present record, and we add the following for emphasis only.¹

The Examiner properly determined that James, Cook, and Uschold '480 taken with Effenberger or Froggatt would have suggested to one of ordinary skill in the art the emulsion polymerization of vinyl fluoride copolymers. The Examiner properly concluded that it would have been obvious to one of ordinary skill in the art to use varying amounts of the comonomers with an expected variation of properties due to effects on crystallinity, melting point and varying amounts of fluorine content. The Examiner recognized that the present record lacked a showing of criticality for the claimed amounts of comonomers. Appellant did not dispute the Examiner's conclusion. Appellant also did not provide evidence to establish the criticality of the claimed amounts of comonomers.

Appellant contends that, since the polymer product of James and Cook was recovered by filtration, one skilled in the art would interpret the filterable product as produced by a high shear process that cannot reasonably be read to teach or suggest an emulsion polymerization process which produces a latex which is not filterable (Br. 11, Reply Br. 2-3).

We do not agree that the filtering of the product from the polymerization media would necessarily exclude emulsion polymerization.

¹ In rendering this decision, we have considered the Appellant's position presented in the Briefs filed April 12, 2006 and February 19, 2004 and the Examiner's position set forth in the Answer and the Office Actions of April 21, 2003 and September 10, 2002.

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In fact, Appellant's example in the Specification discloses that the recovered polymer was separated from the latex by filtering (Specification 11).

The Examiner found that Uschold '480 discloses the emulsion polymerization of vinyl fluoride was known to have been carried out in water with an initiator such as 2,2'-azobis(isobutyroamidine) dihydrochloride, such as is used in the instant application, to yield finely divided polymer particles. Uschold '480 did not disclose the preparation of copolymers. Effenberger and Froggatt described the formation of vinyl fluoride copolymers with tetrafluoroethylene, perfluoroalkylvinyl ethers and perfluorodioxoles interpolymers. The Examiner determined that it would have been obvious to one of ordinary skill in the art to prepare known copolymers such as disclosed by Effenberger or Froggatt, using the process taught by Uschold with the expectation of achieving similar advantages disclosed therein for the preparation of the vinyl fluoride homopolymer.

Appellant contends that Effenberger and Froggatt do not describe vinyl fluoride copolymers (Reply Br. 2). We do not agree. A person of ordinary skill in the art would have recognized that Effenberger and Froggatt describe copolymers. *See* Effenberger claim 2 and Froggatt claim 1.

The Examiner recognized that James, Cook, and Uschold '480 taken with Effenberger or Froggatt, were deficient in not teaching the use of a horizontal autoclave as the reactor. However, the Examiner properly determined that such reactors are well known in the art and used for emulsion polymerization under pressure as disclosed by Barber (Examples A, 15), Feiring (Examples 28, 31), and Farnham (Examples 12-13, 16-21).

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The Examiner recognized that the present record lacked a showing of criticality for the reactor used. Appellant did not provide evidence to establish the criticality of the reactor.

In conclusion, based on the foregoing and the reasons well stated by the Examiner, the Examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

tf/ls

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