

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte NICHOLAS A. STACEY, ALASTAIR S. DODDS,
and LUKE C. WILLIAMS

Appeal No. 97-0313
Application No. 08/346,083¹

ON BRIEF

Before KIMLIN, JOHN D. SMITH and WARREN, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 6-13, all the claims remaining in the present application.

Claims 7 and 13 are illustrative:

¹ Application for patent filed November 29, 1994.

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7. A plastic optical fibre comprising a core formed of a copolymer of 1H,1H-perfluorocyclohexylmethyl 2-fluoroacrylate.

13. An optical element comprising a homopolymer or copolymer of 1H,1H-perfluorocyclohexylmethyl 2-fluoroacrylate.

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

Yamamoto et al. (Yamamoto)	5,111,526	May 5, 1992
Savu et al. (Savu)	5,148,511	Sep. 15, 1992
McAllister et al. (McAllister) (European patent application)	WO 93/03074	Feb. 18, 1993
Bosc et al. (French '510) (French patent application)	2 623 510	May 26, 1989

Appellants' claimed invention is directed to an optical fiber or element comprising a homopolymer or copolymer of 1H,1H-perfluorocyclohexylmethyl 2-fluoroacrylate. According to appellants, "the inventive fibers have excellent physical properties when compared to other highly fluorinated polymer materials which have been reported as low attenuation materials" (page 7 of Brief).

Appealed claims 7-9 and 11-13 stand rejected under 35 U.S.C. § 103 as being unpatentable over McAllister in view of French '510. Claim 13 stands rejected under 35 U.S.C. § 103 as being unpatentable over Savu in view of French '510 and Yamamoto.

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The examiner has withdrawn the final rejection of appealed claims 6 and 10 and has indicated that these claims are allowable (see page 2 of Answer).

Regarding the rejection of claims 7-9 and 11-13 under 35 U.S.C. § 103 over McAllister in view of French '510, appellants submit that the claims stand or fall together (see page 9 of Brief).

We have thoroughly reviewed each of appellants' arguments for patentability, as well as the specification data relied upon in support thereof. However, we are in full agreement with the examiner that the subject matter of appealed claims 7-9 and 11-13 would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the examiner's rejections for the reasons set forth in the Answer, which we incorporate herein. We add the following primarily for emphasis.

We consider first the rejection of claims 7-9 and 11-13 over McAllister in view of French '510. There is no dispute that the only difference between the monomers of McAllister, which are used to produce a polymer for the core material of

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an optical fiber, and the monomers of the present invention is that the McAllister monomers contain a methacrylate group whereas appellants' monomers contain a fluoroacrylate group. Appellants also do not refute the examiner's legal conclusion that it would have been obvious for one of ordinary skill in the art, based on the equivalency between a fluoroacrylate group and a methacrylate group demonstrated by French '510, to substitute appellants' fluoroacrylate group for the methacrylate group of McAllister in order to obtain a polymer having a lower refractive index, lower attenuation and higher glass transition temperature. Rather, it is appellants' position that:

Although the suggested increase in the Tg, lower refractive index, and lower attenuation of the McAllister polymer(s) by replacing the methyl groups with fluoro groups may be presumed, the actuality of these particular properties does not predict the other critical and unexpected benefits observed, particularly the significant improvement in decomposition temperature. [Page 11 of Brief].

Appellants contend that one of ordinary skill in the art would have expected that replacement of methyl groups with fluoro groups would yield an increase of only 30°C in decomposition temperature over the decomposition temperature of the methacrylate polymer, i.e., 200°C. Appellants maintain that

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the actual decomposition temperature of the fluoroacrylate polymer, 360EC, would have been unexpected to one of ordinary skill in the art.

Based on the comparative data relied upon by appellants, the examiner allowed claims 6 and 10 which are directed to a homopolymer of the fluoroacrylate monomer. However, the examiner has maintained the rejection of claims 7-9 and 11-13 because they encompass copolymers of the fluoroacrylate monomer, and appellants' comparative data is not commensurate in scope with such claims. In particular, the examiner notes that appellants' specification data regarding decomposition temperature is limited to the homopolymer of the acrylate monomer. Since appellants have not advanced any argument that the specification data establishes unexpected results for copolymers of the fluoroacrylate monomer within the scope of claims 7-9 and 11-13, we agree with the examiner that the prima facie obviousness of claims 7-9 and 11-13 has not been rebutted by appellants.

We will also sustain the examiner's rejection of claim 13 over Savu in view of French '510 and Yamamoto for essentially the same reasons discussed above. Both appellants and the

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examiner present the same arguments that were made for the rejection over McAllister in view of French '510. In addition, appellants maintain that "[t]he perfluorinated alkyl methacrylate polymers disclosed in Savu are directed to cladding materials for optical fibers; whereas the inventive perfluorocyclohexylmethyl substituted fluoroacrylates are directed to the core of the optical fiber" (page 14 of Brief). However, as noted by the examiner, claim 13 on appeal defines an "optical element" and, thereby, is not limited to the core of an optical fiber, but encompasses the cladding material of an optical element. Consequently, appellants' argument is not germane to the claimed subject matter.

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 CFR § 1.136(a).

AFFIRMED

EDWARD C. KIMLIN)
Administrative Patent Judge)

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