The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DR. MICHAEL ROMER,
ANASTASIOS DIMITRIADIS and DIRK RAUDIES

Appeal No. 2000-1854
Application No. 08/993,426

ON BRIEF

Before KIMLIN, WARREN and KRATZ, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 19-32, all the claims remaining in the present application. Claim 19 is illustrative:

19. A polymer composition containing

from 5.0% by weight to 65.0% by weight of at least one thermotropic liquid crystalline copolymer,

from 35% by weight to 95.0% by weight of at least one thermoplastically processable polycarbonate and

from 0.01% by weight to 5.0% by weight of at least one of reinforcing agents (a) or (b), said component reinforcing agent (a) being a polyetherimide, an aromatic acid, an aromatic acid anhydride, a siloxane, a silicone-modified compound, or a mixture thereof, said reinforcing agent (b) being a phosphorus-containing compound mixed with a said reinforcing agent (a).

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

Kim	3,334,154	Aug. 1, 1967
Froix	4,460,735	Jul. 17, 1984
Aketa et al. (Aketa)	5,514,739	May 7, 1996

Appellants' claimed invention is directed to a polymer composition comprising a thermotropic liquid crystalline copolymer, a thermoplastically processable polycarbonate, and at least one reinforcing agent selected from one of the specified groups (a) or (b). The composition finds utility in forming thin-walled molded articles.

In accordance with the grouping of claims set forth at pages 6 and 7 of appellants' principal brief, claims 19, 24, 25-28 and 29-31 (Group I) stand or fall together.

Appealed claims 19-25 and 29-32 stand rejected under 35 U.S.C. § 103 as being unpatentable over Aketa. Claims 19-32 stand rejected under 35 U.S.C. § 103 as being unpatentable over Aketa in view of Froix or Kim.

We have thoroughly reviewed each of appellants' arguments for patentability. However, we are in complete agreement with

the examiner that the claimed subject matter would have been prima facie 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 essentially those reasons expressed in the Answer, and we add the following primarily for emphasis.

Appellants do not dispute that Aketa, like appellants, discloses a polymer composition for preparing molded articles exhibiting enhanced mechanical properties which comprises the presently claimed thermotropic liquid crystalline copolymer, thermoplastically processable polycarbonate and a phosphorus-containing compound which serves as a reinforcing agent. As explained by the examiner, Aketa exemplifies a molding composition comprising a thermotropic liquid crystalline copolymer, polycarbonate and phosphorus-containing reinforcing agent in amounts which fall within appellants' claimed ranges (see EXAMPLE 1). Aketa does not expressly disclose that the phosphorus-containing reinforcing agent is mixed with another reinforcing agent, such as a silicone-modified compound, as specified in the appealed claims. However, there is no dispute that Aketa specifically teaches that the molding composition may also contain silicone resins in an amount, 1%, which falls

directly within the claimed range of 0.01-5.0% (claim 19). Accordingly, although Aketa does not describe the silicone resins as reinforcing agents, per se, we concur with the examiner that appellants' molding composition is suggested by and, therefore, prima facie obvious over the Aketa disclosure. We agree with the examiner that EXAMPLE 12 of Aketa would have provided sufficient motivation to one of ordinary skill in the art to employ a thermoplastic elastomer, such as ABS or silicone resins, in the molding composition of Aketa for the purpose of increasing the compatibility of the composition and the Izod impact strength (see page 5 of Answer).

Appellants urge that Aketa discloses silicone resins in a "laundry list" of thermoplastic resins and, therefore, the reference does not teach the skilled artisan the combination of a silicone resin with a phosphite reinforcing agent, citing In re Baird, [16 F.3d 380, 383,] 29 UPSQ2d 1550, 1552 (Fed. Cir. 1994) and In re Jones, [958 F.2d 347, 351,] 21 USPQ2d 1941, 1943 (Fed. Cir. 1992). However, we agree with the examiner that the list of additional thermoplastic resins disclosed by Aketa is not tantamount to the "potentially infinite genus" addressed by Baird and Jones.

Appellants state at page 12 of the principal brief that "[a]lso of significance, is that none of the twenty-one examples shown in Aketa apparently use any of the disclosed additional resins" (second paragraph). We simply do not understand this argument of appellants since, as pointed out by the examiner, EXAMPLES 6-15 of Aketa all comprise "additional resins" (see TABLE 2).

Regarding appellants' argument that the 1 to 90 parts of additional thermoplastic resins disclosed by Aketa indicates that the additional resins, including silicone resins, are not taught as reinforcing agents (page 13 of principal brief, first paragraph), it is not necessary for a finding of obviousness under § 103 for the prior art to teach the same purpose for including a component in a composition. See In re Kemps, 97 F.3d 1427, 1430, 40 USPQ2d 1309, 1311 (Fed. Cir. 1996); In re Dillon, 919 F.2d 688, 693, 16 USPQ2d 1897, 1901 (Fed. Cir. 1990) (en banc), cert. denied, 500 U.S. 904 (1991). As explained above, one of ordinary skill in the art would have been motivated to include the claimed amounts of silicone resins in the molding compositions of Aketa for the purpose of enhanced compatibility and Izod impact strength.

Appellants assert at page 2 of the principal brief that "[t]he polymer composition according to the present invention unexpectedly provides superior mechanical properties, especially in thin walls" (paragraph three). However, appellants have not proffered any objective evidence which demonstrates that molding compositions within the scope of the appealed claims produce unexpectedly superior mechanical properties in comparison to the molding compositions fairly taught by Aketa. In particular, there is no evidence of record which establishes that the claimed mixtures of phosphorus-containing compounds and other recited reinforcing agents are superior in any respect to the compositions of Aketa which may contain only the phosphorus-containing compound. In fact, appellants' own specification would seem to militate against any suggestion that the claimed mixture of reinforcing agents is a significant, if not critical, aspect of the present invention. We say this because page 2 of the present specification describes the present invention, as well as "preferred" and "particularly preferred" embodiments of the present invention, as compositions comprising "at least one reinforcing agent." Manifestly, "at least one reinforcing agent" does not require, or attach significance to, <u>particular</u> mixtures of agents comprising a phosphorus-containing compound.

We also agree with the examiner's reasoning pertaining to the separately argued claims on appeal. The narrower ranges of amounts of components in claims 20 and 21 are rendered prima facie obvious by the broader ranges disclosed by Aketa. In re Malagari, 499 F.2d 1297, 1303, 182 USPQ 549, 553 (CCPA 1974). Regarding claim 22, appellants contend that "[n]either of the claimed silicon-containing compounds are taught by Aketa or the secondary references" (page 18 of principal brief, first full paragraph). However, "a silicone elastomer" of claim 22 is met by the silicone resins disclosed by Aketa. Likewise for "a silicone elastomer" of claim 23.

As for the injection-molded article of claim 32 "with a wall whose tensile modulus is increased as its thickness decreases," we find it reasonable to conclude that the molded articles fairly taught by Aketa would meet the claimed relationship. In re Spada, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990); In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). Appellants have not presented any comparative objective evidence to demonstrate otherwise.

In conclusion, based on the foregoing, 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	)	
CHARLES F. WARREN Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
PETER F. KRATZ Administrative Patent Judge	)	

ECK:clm

Connolly and Hutz
P.O. Box 2207
Wilmington, DE 19899