The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARC VAN DAMME, JOAN VERMEERSCH,
FRANK LOUWET and RAF SAMIJN

Appeal No. 2000-0812
Application No. 08/989,469

HEARD: FEBRUARY 12, 2002

Before KRASS, BARRETT and SAADAT, Administrative Patent Judges.

SAADAT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the Examiner's final rejection of claims 11 through 19. Claims 1 through 10 have been canceled.

We reverse.

BACKGROUND

Appellants' invention is directed to a method for making

a heat-sensitive imaging element for use in lithographic printing

plates. The method includes forming of an image-forming layer on a hydrophilic surface of a lithographic base wherein the layer comprises hydrophobic thermoplastic polymer particles dispersed in a hydrophilic binder (specification, page 4). The polymer particles have an average size between 40 nm and 150 nm having a polydispersity of less than 0.2 which results in improved sensitivity and throughput of the imaging element (specification, pages 4 & 5). The imaging element is exposed to light and then developed by rinsing with plain water or an aqueous liquid (specification, page 8).

Representative independent claim 11 is reproduced as follows:

> 11. A method for making a lithographic printing plate comprising the steps of:
>
> (1) image-wise exposing to light of a laser that operates in infrared or near-infrared an imaging element comprising (i) on a hydrophilic surface of a lithographic base an image forming layer comprising hydrophobic thermoplastic polymer particles, said hydrophobic polymer particles having an average particle size of 40nm to 150nm based on an intensity-weighted size distribution and a polydispersity of less than 0.2 and (ii) a compound capable of converting light to heat, said compound being

in said image forming layer or a layer adjacent thereto;

(2) and developing a thus obtained image-wise exposed imaging element by rinsing it with plain water or an aqueous liquid.

The prior art references of record relied upon by the Examiner in rejecting the appealed claims are:

Vrancken et al. (Vrancken)	4,004,924	Jan. 25, 1977
Haugh et al. (Haugh)	4,496,652	Jan. 29, 1985[1]
Coppens et al. (Coppens)	5,273,858	Dec. 28, 1993
Verburgh et al. (Verburgh)	WO 94/18005 (International Application)	Aug. 18, 1994

Claims 11 through 16 and 18 stand rejected under 35 U.S.C. § 103 as being unpatentable over Vrancken in view of Appellants' admission of prior art and Coppens. Claims 17 and 19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Vrancken in view of Appellants' admission of prior art and Coppens in combination with Verburgh.[2]

Rather than reiterate the conflicting viewpoints advanced by the Examiner and Appellants regarding the above-noted rejections, we make reference to the answer (Paper No. 14,

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[1] The Examiner cites Haugh in the answer to demonstrate that homodispersity of Coppens is also known as monodispersity.

[2] We note that the rejection of claims 14, 15 and 19 under 35 U.S.C. § 112, as set forth in the final rejection (Paper No. 6, mailed March 4, 1999, has been withdrawn by the examiner subsequent to entry of amendments to claims 14 and 19 (papers No. 8 and 11, filed May 4, 1999 and August 4, 1999, respectively).

mailed October 1, 1999) for the Examiner's complete reasoning in support of the rejections, and to the brief (Paper No. 13, filed August 4, 1999) and the reply brief (Paper No. 17, filed December 1, 1999) for Appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to Appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by Appellants and the Examiner. After careful review of the evidence before us, it is our conclusion that the evidence provided by the Examiner is insufficient to establish a prima facie case of obviousness. Accordingly, we will not sustain the Examiner's rejection of claims 11 through 19 under 35 U.S.C. § 103.

Appellants argue that Vrancken does not teach or suggest the recited features related to the polydispersity of the hydrophobic thermoplastic polymer particles while Coppens merely suggests homodispersity or polydispersity of the image [forming] grains in a lithographic plate. In particular, Appellants assert that one skilled in the art would not combine teachings related to a chemical image development with that of a physical image formation process (brief, pages 5 &

6). Furthermore, Appellants argue that knowing benefits of uniform particle size for silver halide photography does not mean that the same particle size relationship applies to image forming by physical processes (brief, page 6), and thus, is not sufficient to show obviousness (brief, page 7).

In response to Appellants' arguments, the Examiner recognizes that Coppens does not expressly teach the claimed thermoplastic polymer particles. However, the Examiner concludes (answer, page 5) that "one of ordinary skill in the art would realize that the benefits of uniformity of grain size in silver halide printing plates would provide similar benefits in physical image formation printing plates." The examiner further points out that the claimed polydispersity of less than 0.2 is considered to be similar to monodispersity of the grains in Coppens (answer, page 6).

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). The conclusion that the claimed subject matter is obvious must be supported by

evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Furthermore, to reach a conclusion of obviousness under § 103, the examiner must also produce factual basis supported by teaching in a prior art reference or shown to be common knowledge

of unquestionable demonstration, consistent with the holding in Graham v. John Deere Co., 383 U.S. 1 (1966). Our reviewing court requires this evidence in order to establish a prima facie case. In re Piasecki, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984); In re Cofer, 354 F.2d 664, 668, 148 USPQ 268, 271-72 (CCPA 1966).

Turning to Vrancken, we find that the reference discloses a process for reproducing images by exposure to electromagnetic radiation of a recording material that incorporates hydrophobic thermoplastic polymers in the form of particles in heat-conducting relationship with a heat-

sensitive material (col. 1, lines 54-66). Vrancken further teaches various ranges for particle sizes that would result in improved resolution, among which polymer particles not larger than 0.1 Fm [100 nm] are identified to produce particularly good results (col. 8, lines 2-8).

Coppens, on the other hand, is related to a method of making lithographic printing plates that include a substrate, an intermediate layer comprising hydrophobic polymer beads having an average diameter not lower than 0.2 Fm [200 nm] and a silver halide emulsion layer (abstract & col. 12, lines 58-62). We further find that Coppens teaches that the average size of the silver halide grains may range from 0.2 to 1.2 Fm [200-1200 nm] where the grain size distribution can be homodisperse or heterodisperse (col. 16, lines 37-42). Although we acknowledge that Coppens refers to the benefits of uniform silver halide grains resulting in development of crisper and more uniform images, we do not find any teachings related to similar preference or benefits related to homodispersity of the hydrophobic polymer beads.

Based on the findings above, we cannot agree with the examiner that the homodispersity of silver halide grains of

Coppens in combination with the teachings of Vrancken would result in the claimed lithographic printing plate and its polymer particle size and polydispersity. In that regard, while Vrancken discloses the claimed range for polymer particle size by specifying the particles of not larger than 100 nm, Coppens' polymer particles are required to be larger than 200 nm which is much larger than the claimed range. Furthermore, we find that the heterodispersity or homodispersity of silver halide grains of Coppens neither teaches nor suggests the same for polymer particles, which belong to a completely different layer of the disclosed printing plate. The references do not provide any reasons for one of ordinary skill in the art to apply the properties of Coppens' silver halide imaging layer to the intermediate recording polymer particle layer of Vrancken. The Examiner has further failed to establish why hydrophobic polymer particles of Vrancken would benefit from uniformity of silver halide grain size in Coppens as the polymer particles and the silver halide grains belong to different layers, each having a different composition and function.

Thus, we find no reason or suggestion for combining

various teachings from these references, as set forth by the Examiner, to arrive at the claimed invention. Accordingly, we do not sustain the rejection of claims 11 through 18 under 35 U.S.C. § 103 over Vrancken in view of Appellants' admission of prior art and Coppens.

We note that independent claim 19 includes the limitations related to the size and polydispersity of hydrophobic polymer particles of independent claim 11. While Verburgh teaches an anodized aluminum support, the reference does not teach the claimed average size and polydispersity related to the polymer particles. Therefore, Verburgh does not overcome the deficiencies discussed above in the other references. Accordingly, the rejection of claim 19 under 35 U.S.C. § 103 is not sustained.

CONCLUSION

In view of the foregoing, the decision of the Examiner to reject claims 11 through 19 under 35 U.S.C. § 103 is reversed.

REVERSED

ERROL A. KRASS Administrative Patent Judge	)
LEE E. BARRETT Administrative Patent Judge	) BOARD OF PATENT) APPEALS AND) INTERFERENCES
MAHSHID D. SAADAT Administrative Patent Judge	)

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