

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. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ANN VERBEECK

Appeal No. 1998-1732
Application 08/608,321

HEARD: MARCH 20, 2001

Before JOHN D. SMITH, WARREN, OWENS, *Administrative Patent Judges.*

OWENS, *Administrative Patent Judge.*

DECISION ON APPEAL

This is an appeal from the examiner's refusal to allow claims 1-12 and 15-17 as amended after final rejection. These are all of the claims remaining in the application.

THE INVENTION

The appellants' claimed invention is directed toward a method for making a light sensitive silver halide emulsion comprising tabular grains having colloidal silica sol as a protective colloid. Claim 1 is illustrative:

1. Method for preparing a light-sensitive silver halide emulsion comprising tabular grains containing colloidal silica sol as a protective colloid, said tabular grains having an average grain thickness of not more than 0.3 Fm, an average aspect ratio of more than 12:1, a total projective area of said tabular grains of at least 90% and a coverage degree by silica sol particles within the range from 50 to 2000%, comprising the following steps:

precipitating in a reaction medium silver halide by means of a double-jet or triple-jet technique applied to aqueous solutions of silver nitrate and halide salts in colloidal silica having an average particle size in the range from 0.003 Fm to 0.30 Fm as a protective colloid, in the presence as an onium compound of a phosphonium compound; but in the absence of gelatin, wherein a ratio by weight of said colloidal silica to said phosphonium compound is obtained between 3 and 400;

controlling nucleation and growth steps by means of variable flow rate(s) of aqueous solutions of silver nitrate and halide salts and/or by means of constant pAg-values during said steps;

subjecting the reaction medium to at least one physical ripening step;

desalting the reaction medium and redispersing the silver halide obtained;

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chemically ripening the silver halide and

adjusting a ratio by weight of colloidal silica sol to amount of silver halide, expressed as an equivalent amount of silver nitrate, to a value of at least 0.03 at all times during precipitation in a reaction vessel.

THE REFERENCES

Vandenabeele et al. (EP '092) 0 392 092 Oct. 17,
1990
(European patent application)

Vandenabeele (EP '961) 0 517 961 Dec. 16,
1992
(European patent application)

THE REJECTION

Claims 1-12 and 15-17 stand rejected under 35 U.S.C.
§ 103 as being unpatentable over EP '092 in view of EP '961.¹

OPINION

We reverse the aforementioned rejection. We need to address only claim 1, the subject matter of which is included in all of the claims.

¹ The examiner relies upon pages from an Aldrich catalog (answer, page 6). This reference is not included in the statement of the rejection and, therefore, is not properly before us. See *In re Hoch*, 428 F.2d 1341, 1342 n.3, 166 USPQ 406, 407 n.3 (CCPA 1970). Consequently, we do not consider this reference in reaching our decision.

EP '092 discloses a method for making a light sensitive silver halide emulsion comprising grains which contain colloidal silica sol as a protective colloid and which may be tabular grains (abstract; page 4, line 26). The size of the grains may be 0.01 to 7 μm (page 4, lines 36-37). In an example, the aspect ratio of the grains is up to 12 (page 9, line 56). The degree of coverage by silica sol particles is 50-100% (page 5, line 55).

The method includes precipitating silver halide in a reaction medium comprising an aqueous solution of silver nitrate and a halide salt in colloidal silica, by means of a technique which can be a double-jet method (page 4, lines 18-19) (page 6, lines 41-46). Suitable colloidal silicas include Syton®, Ludox®, Nalco®, Nalcoag®, and Kieselsol® Types 100, 200 and 600 (page 4, lines 2-5), which are among the colloidal silicas used by the appellants (specification, page 5, lines 10-18) and, therefore, include particles within the average particle size limitation of claim 29. The precipitation takes place in the presence of an onium compound which can be a phosphonium compound (page 3, lines 25-54). The teaching that in the precipitation "the protective colloid can comprise

silicic acid sol and gelatin" (page 3, line 15) indicates that gelatin may be present or absent, and EP '961 discloses such a precipitation in the absence of gelatin (page 3, line 48).

The ratio of onium compound to colloidal silica is preferably 0.5×10^{-3} to 5×10^{-3} mol of onium compound per 90g of SiO_2 (page 3, lines 55-57). The examiner calculates that the EP '092 examples include colloidal silica:onium ratios within the appellants' range of 3-400 (answer, pages 5-6), and in their reply brief the appellants do not challenge the examiner's calculations. The silver halide emulsions can be prepared under conditions of controlled flow rates (page 4, lines 16-18). Steps of physical ripening (page 6, lines 52-53), desalting the reaction medium and redispersing the silver halide obtained (page 4, lines 41-43), chemically ripening the silver halide (page 4, lines 44-56; page 7, line 7), and adjusting the ratio of colloidal sol to silver halide, apparently to keep it in the 0.5-1.0 weight ratio range (page 5, lines 51-58), can be used.

Thus, it is seen that there is substantial overlap between the EP '092 method and that recited in the appellants' claim 1. The appellants' claim 1, however, requires that the

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steps be carried out such that the total projective area of the tabular grains is at least 90%. The examiner does not point out, and we do not find, a disclosed total projective area in the applied references. In their specification (pages 20-21), the appellants coat a support with the photographic tabular grain emulsion of example XVIII of EP '092, and report that the total projective area of the tabular grains is less than 50%. This example indicates that the total projective area of the tabular grains in EP '092 is not necessarily at least 90% as required by the appellants' claim 1, and the examiner has given no reason as to why the applied references would have led one of ordinary skill in the art to prepare an emulsion having tabular grains with such a total projective area.

The examiner argues that "[t]he ranges claimed by Appellant appear to be quite broad to the Examiner and thus are not very narrow limitations. This is especially true of the independent claim" (answer, page 5). Merely arguing that the limitations are not very narrow, however, is not sufficient for carrying the burden of establishing that the claimed invention would have been *prima facie* obvious to one

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of ordinary skill in the art over the applied prior art. Because the examiner has not pointed out where a total projective area of the tabular grains of at least 90% is disclosed in the applied references, or explained why the applied references would have led one of ordinary skill in the art to prepare a silver halide emulsion having tabular grains with such a total projective area, the examiner has not carried the burden of establishing a *prima facie* case of obviousness of the appellants' claimed invention. Consequently, we reverse the examiner's rejection.

DECISION

The rejection of claims 1-12 and 15-17 under 35 U.S.C. § 103 over EP '092 in view of EP '961 is reversed.

REVERSED

JOHN D. SMITH)
Administrative Patent Judge)
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CHARLES F. WARREN)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
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