

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. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LAWRENCE D. LAWRENCE
and RICHARD H. GRANHOLM

Appeal No. 2003-1398
Application 09/472,800

ON BRIEF

Before WARREN, OWENS and JEFFREY T. SMITH, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

Decision on Appeal and Opinion

We have carefully considered the record in this appeal under 35 U.S.C. § 134, including the opposing views of the examiner, in the answer, and appellants, in the brief and reply brief, and based on our review, find that we cannot sustain the rejections of appealed claims 1 and 3 through 5¹ under 35 U.S.C. § 103(a) as being unpatentable over Hajto et al. (Hajto) in view of Tucker et al. (Tucker), Cescon et al. (Cescon) and Richard et al. (Richard).² We consider appellants' statement in the brief that "claim 7 may be cancelled and need not be considered in this appeal" (page 1) to constitute withdrawal of the appeal with respect to this claim, which is the only other pending claim, and thus we dismiss the appeal with respect to claim 7.

¹ See the appendix to the brief.

We refer to the examiner's answer and to appellants' brief and reply brief for a complete exposition of the opposing views of the parties.

It is well settled that in order to establish a *prima facie* case of obviousness under § 103(a), the examiner must show that some objective teaching, suggestion or motivation in the applied prior art taken as a whole and/or knowledge generally available to one of ordinary skill in this art would have led that person to the claimed invention as a whole, including each and every limitation of the claims arranged as required by the claims, without recourse to the teachings in appellants' disclosure. *See generally, In re Rouffet*, 149 F.3d 1350, 1358, 47 USPQ2d 1453, 1458 (Fed. Cir. 1998); *Pro-Mold and Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1629-30 (Fed. Cir. 1996); *In re Fine*, 837 F.2d 1071, 1074-76, 5 USPQ2d 1596, 1598-1600 (Fed. Cir. 1988); *In re Dow Chem. Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531-32 (Fed. Cir. 1988).

As an initial matter, we find that, when considered in light of the written description in the specification as interpreted by one of ordinary skill in this art, *see, e.g., In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000); *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997), *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989), the plain language of appealed claim 1 requires that the claimed ammonium nitrate-fuel oil (ANFO) blasting composition has the specified poured bulk density and consists essentially of at least an organic fuel selected from the group consisting of mineral oil, diesel fuels and mixtures thereof, and prilled ammonium nitrate which is specified to be porous and have a poured bulk density of from about 0.9 to about 1.0 g/cc, a particle size of less than about 1.2 mm and an oil-absorption capacity of greater than about 5%. Appellants define oil absorption capacity in the written description in the specification as that measured by using No. 2 fuel oil in either of two ways (pages 8-9). *See, e.g., Morris, supra; Zletz, supra* ("During patent prosecution the pending claims must be interpreted as broadly as their terms reasonably allow. When the applicant states the meaning that the claim terms are intended to have, the claims are examined with that meaning, in order to achieve a complete exploration of the

² Answer, pages 3-5.

applicant's invention and its relation to the prior art. *See In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).”).

The examiner finds that Hajto discloses high density ammonium nitrate prills at col. 4, lines 1-33, as well as col. 8, line 39, and points to Examples 7-12 in Hajto Table as having at least 5% oil capacity (answer, pages 3 and 7-8). The examiner relies on col. 3, lines 1-6, of Tucker for the proposition that “using small particles, would have been obvious,” and further finds that Cescon “teach regarding fines details, e.g., [Richard], at col. 5, lines 49-60, teach the size of miniprills, and this substantially overlaps the size claimed herein” (*id.*, pages 3 and 7). On this basis, the examiner finds that it would have been obvious “to use the taught most desirable density of miniprills, which would have the corresponding size as claimed” and to use “[v]ariations of these notoriously well known parameters to obtain a satisfactory ANFO explosive” by optimizing result effective variables (*id.*, pages 3-4). Thus, the examiner concludes (*id.*, page 4) that the claimed products and those in the prior art appear to be the same or only slightly different and thus the properties recited would appear to be inherent, thus shifting the burden to appellants to patentably distinguish the claimed products from those of the prior art, relying on the authority of *In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985), and *In re Best*, 562 F.2d 1252, 1255-56, 195 USPQ 430, 433-34 (CCPA 1977).

Appellants submit that there is a difference in porosity between the claimed porous prills and the high density prills of Hajto as the latter are relatively non-porous, which carries with it low oil absorption as measured by appellants, and thus the prills of the reference do not necessarily or inherently satisfy the limitations of the appealed claims (brief, pages 7-8; reply brief, pages 2-4). Appellants point out that the fuels and method of determining oil absorption capacity used by Hajto differ from that required by the appealed claims (reply brief, page 3). Appellants further point out differences between the appealed claims and the fines of Tucker, the emulsion phase of Cescon which does not provide an ANFO, and the miniprills of Richard (*id.*, pages 9-10).

In light of the positions of the examiner and appellants, we determine that the examiner has not established a *prima facie* case of obviousness with respect to inherency on the authority of *Thorpe* and *Best*, or that one of ordinary skill in this art would have modified or replaced the

prills of the ANFO of Hajto to arrive at an ANFO containing prills as specified in the appealed claims in light of Tucker, Cescon and Richards. The examiner has not established that the prills used by Hajto are porous and have an oil absorption capacity which satisfies the limitations of the appealed claims, and the method used to test for oil capacity by Hajto does not employ No. 2 fuel oil in the test as required for the appealed claims as we pointed out above. Thus, we find no evidence on which to base the conclusion that it reasonably appears that the claimed prills and those of Hajto are substantially identical even though Hajto is silent with respect to particle size. *See Best*, 562 F.2d at 1254-55, 195 USPQ at 432-33 (“Because any sample of Hansford’s calcined zeolitic catalyst would necessarily be cooled to facilitate subsequent handling, the conclusion of the examiner that such cooling is encompassed by the terms of the appealed claims was reasonable.”); *see also In re Spada*, 911 F.2d 705, 708-09, 15 USPQ2d 1655, 1657-58 (Fed. Cir. 1990) (“The Board held that the compositions claimed by Spada ‘appear to be identical’ to those described by Smith. While Spada criticizes the usage of the word ‘appear’, we think that it was reasonable for the PTO to infer that the polymerization by both Smith and Spada of identical monomers, employing the same or similar polymerization techniques, would produce polymers having the identical composition.”)

Furthermore, we find that the modification of the particle size proposed by the examiner is not supported by the secondary references. Tucker acknowledges that “inherently low porosity” high density ammonium nitrate must be “made very small” to achieve “the desired amount of fuel oil (*albeit, on the surface* of the AN prills)” (col. 3, lines 1-6; emphasis supplied), noting that “[n]ormally, ANFO is such that the . . . prills must *absorb* at least about 6% (wt.) fuel oil” (col. 3, lines 6-7).³ The explosive compositions of Cescon are in fact emulsions, not ANFO. While the combined ammonium nitrate filler material, which are mini prills having the particle size set forth at col. 5, lines 49-60, and ammonium nitrate particles of Example 1 of Richard would appear to have an overall particle size and an untapped bulk density which would fall within the limitations of the appealed claims (see also, e.g., cols. 1-2, col. 4, lines 1-11, and col.

³ The examiner should compare the prills of the claimed ANFO with the prills disclosed by Tucker (e.g., col. 4, line 36, to col. 5, line 2, col. 7, lines 19-32, and cols. 7-11) in connection with any further prosecution of the appealed claims subsequent to the disposition of this appeal.

5, lines 5-21 and 40-48), there is no disclosure of oil absorption capacity. The examiner does not establish any relationship based on properties other than particle size between the ammonium nitrate particles of Hajto and those of the secondary references.

Thus, on this record, the examiner has not established that the prills of Hajto are porous and have an oil absorption capacity which satisfies the limitations of the appealed claims, and while the secondary references may evince particle size as a recognized result effective variable, that fact alone provides no more than general guidance to try a smaller particle size. Thus, the combined teaching of the applied reference would not have provided a reasonable suggestion that the modification of the particle size of the prills of Hajto would reasonably be expected to result in the AN prills having all of the properties specified by the appealed claims. *See In re O'Farrell*, 853 F.2d 894, 903-04, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988) (“In [other cases], what was ‘obvious to try’ was to explore a . . . general approach that seemed to be a promising field of experimentation where the prior art gave only general guidance as to the particular form of the claimed invention or how to achieve it. [Citations omitted.]”).

The examiner’s decision is reversed.

Reversed

CHARLES F. WARREN)	
Administrative Patent Judge)	
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TERRY J. OWENS)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
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