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Row 2: 87884, 7590, 11/15/2016, Mossman, Kumar and Tyler, PC, P.O. Box 421239, Houston, TX 77242
Row 3: EXAMINER, BLAND, ALICIA
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TIANPING HUANG, JAMES B. CREWS,
JOHN R. WILLINGHAM, and CHRISTOPHER K. BELCHER

Appeal 2015-005151
Application 13/415,505
Technology Center 1700

Before CATHERINE Q. TIMM, CHRISTOPHER C. KENNEDY, and
DEBRA L. DENNETT, *Administrative Patent Judges*.

DENNETT, *Administrative Patent Judge*.

DECISION ON APPEAL¹

¹ In our Opinion below, we refer to the Specification filed March 8, 2012 (“Spec.”), the Final Action mailed June 25, 2014 (“Final Act.”), the Appeal Brief filed November 25, 2014 (“App. Br.”), the Examiner’s Answer mailed February 6, 2015 (“Ans.”), and the Reply Brief filed April 6, 2015 (“Reply Br.”).

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from a rejection of claims 1–9 and 11. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

The claims are directed to methods for treating a subterranean formation comprising introducing a treating fluid including nanoparticles and fixing fines within the formation with the nanoparticles. Claim 1, reproduced below with the disputed limitations highlighted, is illustrative of the claimed subject matter:

1. A method for treating a subterranean formation comprising:

introducing into the subterranean formation a treating fluid comprising:

a base fluid, and

an amount of a particulate additive effective to reduce fines migration, the particulate additive:

having a mean particle size of 100 nm or less, and

being selected from the group consisting of alkaline earth metal oxides, alkaline earth metal hydroxides, alkali metal oxides, alkali metal hydroxides, transition metal oxides, transition metal hydroxides, post-transition metal oxides, post-transition metal hydroxides, where[in] the post-transition metal is selected from the group consisting of gallium, indium, tin, thallium, lead and bismuth, piezoelectric crystals, pyroelectric crystals, and mixtures thereof, and

fixing fines within the formation with the particulate additive, *in the absence of cementing*, by associating the fines with the formation by surface forces of the particulate additive thereby reducing fines migration, where fines are different from

the particulate additive, have a size less than 37 microns, and are selected from the group consisting of clays, quartz, amorphous silica, feldspars, zeolites, carbonates, salts and micas, *without being pore plugging*.

App. Br. 23–24 (Claims App’x).

REFERENCES

The Examiner relies on the following prior art in rejecting the claims on appeal:

Huang et al. (“Huang ’201”) US 2009/0312201 A1 Dec. 17, 2009

REJECTIONS

Claims 1–9 and 11 stand rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over Huang ’201.

OPINION

Appellants do not argue the separate patentability of the claims on appeal, although they note that independent claims 1 and 7 have differing scope. *See* App. Br. 7. Both independent claims contain the limitations at issue here: “in the absence of cementing” and “without being pore plugging.” We select claim 1 as representative of the group. The remaining claims will stand or fall with claim 1. 37 C.F.R. § 41.37(c)(iv) (2014).

The Examiner rejects the claims over Huang ’201, which is a parent application to the instant application. Final Act. 8; *see* Spec. ¶ 1. The pivotal issue in this appeal is the Examiner’s treatment of the limitations “without being pore plugging” and “in the absence of cementing.” *See, e.g.,*

id. at 2. Both independent claims of the application on appeal contain the disputed limitations. App. Br. 23, 25. The limitations raise issues of both priority and patentability.

Priority

We turn first to the issue of priority, and the limitation “in the absence of cementing,” which appears in all claims of the instant application. Cementing, indeed, “cement” does not appear in the parent application. *See generally* Huang ’201. The Examiner finds, and Appellants do not dispute, that “in the absence of cementing” is new to the instant application, causing the application’s priority date to be March 8, 2012.² Final Act. 2; *see also* App. Br. 14. All of the appealed claims contain the “in the absence of cementing” limitation, thus Huang ’201 applies as § 102(b) prior art to all of the claims. *See In re Chu*, 66 F.3d 292, 297 (Fed. Cir. 1995) (“Chu [continuation-in-part of Doyle patent] is entitled to the benefit of the Doyle patent filing date only if the Doyle patent discloses the subject matter now *claimed* by Chu.”).

Appellants also acquiesce to the Examiner’s finding that the claim limitation “without being pore plugging” as used in claim 1 is new matter to the instant application. *Compare* Final Act. 2 (“the limitation is still deemed ‘new and unsupported’ by the parent case) *with* App. Br. 13 (“The Examiner *correctly* notes that the limitation ‘without being pore plugging’ in claim 1 is new to the instant application.”) (Emphasis added).

² Only claims that are disclosed in the manner provided by 35 U.S.C. § 112 ¶ 1 in the prior-filed applications related to a continuation-in-part application are entitled to the benefit of the filing date of the prior-filed application. 35 U.S.C. § 120 (2006).

The filing of a continuation-in-part application to overcome a rejection does not give rise to an irrebuttable presumption of acquiescence in the rejection. *Pennwalt Corp. v. Akzona Inc.* 740 F.2d. 1573, 1578–79 (Fed. Cir. 1984). However, here the applicant unambiguously acknowledges that the limitation “without being pore plugging” is new matter to the instant application. App. Br. 13. Appellant is thus estopped from arguing for priority to the filing date of Huang ’201. *See, Litton Sys., Inc. v. Whirlpool Corp.*, 728 F.2d 1423, 1440 (Fed. Cir. 1984) (“Litton chose instead to abandon its right to review via PTO appellate procedure, and rather, acquiesced to the PTO’s requirement for a C–I–P declaration, for whatever reason. Litton is now bound to its acquiescence.”); *Pennwalt Corp.*, 740 F.2d at 1580 (“In view of Armak’s failure to show that it did not acquiesce, Armak is estopped from asserting that the grandparent application complied with the first paragraph of 35 U.S.C. § 112 in order to gain benefit of that application’s [] filing date under 35 U.S.C. § 120.”). For this additional reason, Huang ’201 qualifies as § 102(b) prior art.

Anticipation or obviousness

With Huang ’201 available as § 102(b) prior art, the question becomes whether the reference anticipates or renders obvious all elements of the appealed claims.

It is undisputed that in both the parent (Huang ’201) and the instant case, Appellants added the limitation “without being pore plugging” to the claims in order to overcome the prior art. Ans. 3. In Huang ’201, the Examiner rejected the limitations as new matter, Appellants deleted them from the claims, and filed the instant application as a continuation-in-part. *Id.* at 3–4.

The language related to pore plugging in the Specification is found in paragraphs 10 and 38:

In many cases, fines fixing ability of the treating fluids may be improved by use of nano-sized particulate additives that may be much smaller than the pores and pore-throat passages within a hydrocarbon reservoir, thereby ***being non-pore plugging particles that are less damaging to the reservoir permeability*** than the fines themselves. This smaller size permits the nanoparticles to readily enter the formation, and then bind up or fix the fines in place so that both the fines and the nanoparticles remain in the formation and do not travel as far—or at least ***are restrained to the point that damage to the near-wellbore region of the reservoir is minimized.***

...

These very small particle sizes permit the very small particulate additives to ***easily flow through the pores of the subterranean formation and thus these particulate additives are non-pore plugging.*** Further, it has been discovered that the associations or connections or agglomerations or agglomerate composites of the particulate additives (*e.g.* nanoparticles) with the fines are ***non-pore plugging*** as well. That is, the fixation of the fines according to the methods described herein ***is without being pore plugging.***

Spec. ¶¶ 10, 38 (emphasis added).

One of ordinary skill in the art at the time of the invention would have viewed the Specification as teaching that “without being pore-plugging” (used interchangeably by the Appellants with “non-pore plugging”) means that nano-sized particulate additives much smaller than the pores within a hydrocarbon reservoir, alone or associated or agglomerated with fines, easily flow through the pores of the subterranean formation and are less damaging to the reservoir permeability than the fines themselves. Since some damage may occur to the reservoir ***permeability*** as a result of the nano-sized

particulate additives, alone or associated or agglomerated with fines, some minimal plugging of pores may occur when the additives or agglomerates are said to be “non-pore plugging.”

Appellants contend that “without being pore plugging” cannot be both unsupported by the parent case *and* taught/suggested by Huang ’201. App. Br. 20. Appellants argue that, if Huang ’201 lacked written description for the limitation “without being pore plugging” during its prosecution (the application is now abandoned), then the same publication could not anticipate or render obvious the claims of the instant invention. *Id.* (“How can the same lack of written description support for claim language in a parent application be subsequently found to explicitly teach or render obvious the same language in the claims of a CIP application?”).

We need not resolve any purported issue of inconsistency. Although Appellant presumes the Examiner’s finding of new matter in the grandparent application was correct, we do not make the same presumption. Rather, we consider the question of inherency and obviousness in the context of the anticipation and obviousness rejections before us. There is no issue of lack of written descriptive support before us. Appellant’s acquiescence to the entitlement of the grandparent filing date removes that issue from our review.

Appellants contend that claim 1 is not anticipated by Huang ’201. App. Br. 7.

The Examiner notes that the same compositions and methods are used in Huang ’201 as in the instant application. Ans. 7. “[I]t is elementary that the mere recitation of a newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to those

things to distinguish over the prior art.” *In re Swinehart*, 439 F.2d 210, 212–213 (CCPA 1971).

In Huang ’201, the entirety of the disclosure regarding pore plugging is almost identical to paragraph 17 of the Specification:

In many cases, fines fixing ability of the treating fluids may be improved by use of nano-sized particulate additives that may be much smaller than the pores and pore-throat passages within a hydrocarbon reservoir, thereby ***being non-pore plugging particles that are less damaging to the reservoir permeability*** than the fines themselves. This smaller size permits the nanoparticles to readily enter the formation, and then bind up or fix the fines in place so that both the fines and the nanoparticles remain in the formation and do not travel as far—or at least are restrained to the point that damage to the near-wellbore region of the reservoir is minimized.

Huang ’201 ¶ 17 (emphasis added). Huang ’201 does not include paragraph 18 of the Specification given above, which conveys that not only are nano-size particulate additives non-pore plugging, but specifies that “associations or connections or agglomerations or agglomerate composites of the particulate additives . . . with the fines” are non-pore plugging as well. *See* Spec. ¶ 38.

Huang ’201 teaches mixing treating fluids with nano-sized particulate additives. *See, e.g.*, Huang ’201 ¶ 9. The properties of this composition, which is the same as disclosed in the Specification, are inseparable from the composition itself, and since Huang ’201 teaches the composition, the properties are necessarily present in the reference. *See In re Best*, 562 F.2d 1252, 1255 (CCPA 1977). Therefore, Appellants have not persuaded us of reversible error in the Examiner’s rejection of claim 1 as anticipated by Huang ’201.

In most cases when matter added through amendment to a continuation-in-part application is deemed inherent to the disclosure in the parent application, that matter is entitled to the filing date of the parent application. *Litton*, 728 F.2d at 1438. But where, as here, Appellant has filed a continuation-in-part application in response to a finding of new matter and have stated on the record that the matter lacks written descriptive support in the parent case, Appellant has acquiesced and estoppel applies with regard to the priority date.

The instant application claims methods that do not differ from the methods—and compositions—disclosed in Huang '201. *See*, e.g., Huang '201 ¶¶ 7–10. As a consequence, it is reasonable to presume that “without pore plugging” and “in the absence of cementing”³ are inherent properties of the methods claimed. On the other hand, “a prior art reference without express reference to a claim limitation may nonetheless anticipate by inherency.” *In re Omeprazole Patent Litigation*, 483 F.3d 1364, 1373 (Fed. Cir. 2007).

Under the facts of the present record, Huang '201 qualifies as prior art and anticipates the method of claim 1. Although Appellants argue that claim 7 has a scope that differs from that of claim 1, both claims recite the limitations at issue, and Appellants have not made separate argument for patentability of claim 7. App. Br. 7, 25–26. Claims 2–9 and 11 stand or fall

³ The Examiner finds that Huang '201 does not use cement anywhere in the reference, thus the reference meets the “in the absence of cementing” limitation of the claims. Final Act. 3. Appellant has not identified reversible error in this finding. Huang '201 is sufficient to meet all the claim limitations in an anticipatory manner since the same composition is used therein.

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with claim 1, therefore also are rejected 35 U.S.C. § 102(b) as anticipated by Huang '201. We also affirm the rejection of these claims under 35 U.S.C. § 103(a) as obvious over Huang '201. *See In re McDaniel*, 293 F.3d 1379, 1385 (Fed. Cir. 2002) (“[A]nticipation is the epitome of obviousness.”).

DECISION

For the above reasons, the Examiner’s rejection of claims 1–9 and 11 is AFFIRMED.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED