

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BLACKHAWK SPECIALTY TOOLS, LLC,
Petitioner,

v.

TOP-CO CEMENTING PRODUCTS INC.,
Patent Owner.

Case IPR2015-01661
Patent 7,182,131 B2

Before JOSIAH C. COCKS, MICHAEL J. FITZPATRICK, and
JAMES J. MAYBERRY, *Administrative Patent Judges*.

FITZPATRICK, *Administrative Patent Judge*.

DECISION
Denying *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

Petitioner, Blackhawk Specialty Tools, LLC, filed a Petition to institute an *inter partes* review of claims 1, 2, 6, and 7 of U.S. Patent No. 7,182,131 B2 (Ex. 1001, “the ’131 patent”) pursuant to 35 U.S.C. § 311(a). Paper 3 (“Pet.”). Patent Owner, Top-Co Cementing Products Inc., filed a Preliminary Response pursuant to 35 U.S.C. § 313. Paper 7 (“Prelim. Resp.”).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314(b); 37 C.F.R. § 42.4(a). The information presented in the Petition and Preliminary Response does not show a reasonable likelihood that Petitioner would prevail with respect to any of the challenged claims. *See* 35 U.S.C. § 314(a). Accordingly, we deny the Petition.

A. Related Matters

The parties identify the following related matter: *Top-Co Cementing Prods. Inc. v. Blackhawk Specialty Tools, LLC*, Case No. 4:14-cv-01937 (S.D. Tex.). Pet. 2; Paper 6, 5.

B. The ’131 Patent

The ’131 patent relates to a centralizer for use in wellbore operations. Ex. 1001, 1:13–15. More specifically, the ’131 patent “relates to a centralizer with movable bow springs, particularly a stabilizer that is used in relatively small annular spaces and which also expands for use in a larger annular space.” *Id.* at 1:15–19.

Figure 9 of the '131 patent is reproduced at right and shows centralizer 56 rotatably mounted on sub 12. Ex. 1001, 6:4–12. The sub is connectable in a tubing string, meaning that tubing may be connected above and below. *Id.* at 2:25–28. The centralizer includes multiple bow springs 20, extending from first collar 24 to second collar 26 and biased radially outward. *Id.* at Fig. 9. The bow springs have a relaxed state (shown in Figure 9) and a compressed state in which the collars are at their furthest distance apart from one another. *Id.* at 2:25–36

(describing the two states generally); 3:36–44 (describing the two states in the embodiment of Figure 1); 6:4–9 (stating that the embodiment of Figure 1 functions in the same manner as that of Figure 9, except that the latter is rotatable). The bow springs are forced into a compressed state when the centralizer is inserted into a well or casing having a diameter that is narrower than the outer envelope of the bow springs in their relaxed state. *Id.* at 3:49–53; 6:4–9.

The sub includes shoulders 62 that are positioned between the collars, and the centralizer is retained on the sub by engagement of opposed margins 42 of the collars of the centralizer against the shoulders of the sub. *Id.* at 6:1–4, Fig. 9.

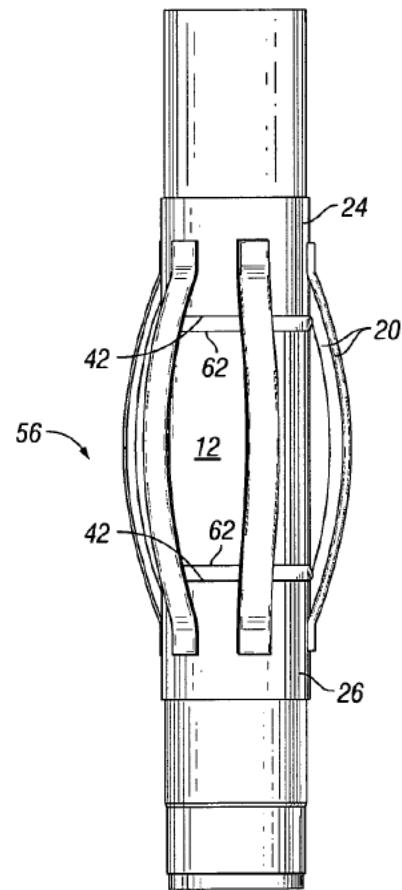


FIG. 9

C. The Challenged Claims

Petitioner challenges claims 1, 2, 6, and 7. Pet. 2–3. Claims 2, 6, and 7 depend from independent claim 1, which is 1 illustrative and reproduced below.

1. A centralizer, connectable in a tubing string, comprising:

a sub, having a first end and a second end opposite the first end,

the sub having at each end thereof thread means for threadably connecting the sub in a tubing string;

a pair of collars, spaced apart from each other, and rotatable mounted on the sub;

the pair of collars comprising a first collar and a second collar;

the first collar and the second collar being capable of axial movement along a length of the sub;

the first collar being located closer to the first end of the sub than the second collar;

the second collar being located closer to the second end of the sub than the first collar;

a plurality of bow springs, having a relaxed and a compressed state, fixed to each of the pair of collars, and which in their fully compressed state, hold the collars at their furthest distance apart along the sub;

a pair of shoulders, fixed to the sub and spaced apart from each other, and extending essentially around the exterior circumference of the sub;

the pair of shoulders comprising a first shoulder and a second shoulder;

the first shoulder being located closer to the first end of the sub than the second shoulder;

the second shoulder being located closer to the second end of the sub than the first shoulder;

the pair of shoulders being positioned between the pair of collars;

the length of axial movement of the first collar when moving in the direction toward the first end of the sub being limited solely by the abutment of the second collar with the second shoulder and the compressed state of the bow springs;

the length of axial movement of the first collar when moving in the direction toward the second end of the sub being limited solely by the abutment of the first collar with the first shoulder;

the length of axial movement of the second collar when moving in the direction toward the second end of the sub being limited solely by the abutment of the first collar with the first shoulder and the compressed state of the bow springs;

the length of axial movement of the second collar when moving in the direction toward the first end of the sub being limited solely by the abutment of the second collar with the second shoulder.

Ex. 1001, 8:2–59.

D. Asserted Grounds of Unpatentability

Petitioner identifies the following as asserted grounds of unpatentability:

References	Basis	Claims Challenged
Hartman (Ex. 1003) ¹	§ 102(b) ²	1, 2, 6, and 7
Hartman and Lirette (Ex. 1005) ³	§ 103(a)	1, 2, 6, and 7

Pet. 18–19.

II. ANALYSIS

A. Claim Construction

“A claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears.” 37 C.F.R. § 42.100(b). Pursuant to that standard, the claim language should be read in light of the specification, as it would be interpreted by one of ordinary skill in the art. *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010). Thus, we generally give claim terms their ordinary and

¹ U.S. Patent No. 2,053,310, issued Oct. 20, 1936.

² The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, took effect on March 18, 2013. Because the application from which the ’131 patent issued was filed before that date, our citations to 35 U.S.C. §§ 102 and 103 are to their pre-AIA version.

³ U.S. Patent No. 5,575,333, issued Nov. 19, 1996. Lirette was reexamined, and Petitioner has included Ex Parte Reexamination Certificate US 5,575,333 C1 as part of Exhibit 1005. Our citations to the Lirette patent are to “Ex. 1005,” and our citations to the reexamination certificate are to “Ex. 1005, C1.”

customary meaning. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007) (“The ordinary and customary meaning is the meaning that the term would have to a person of ordinary skill in the art in question.”) (internal quotation marks omitted).

The Petition includes a claim construction section, consisting primarily of a claim chart that purports to address every limitation of every challenged claim. Pet. 20–25. For purposes of this decision, we need expressly construe only the term “sub.”

Petitioner proposes that “sub” be construed to mean “tube” but provides no explanation for its proposal and cites no evidence to support it. Pet. 20. Patent Owner argues that “a ‘sub’ means ‘a small inline component in a drillstring’,” citing a “Glossary of Oilfield Terms” for support. Prelim. Resp. 12 (citing Ex. 2008, 10). Although it is clear from its title as to what the “Glossary of Oilfield Terms” purports to be, the glossary’s origin is unknown on the record before us, as the record does not shed any light on who authored it, when it was authored, or from where Patent Owner obtained it.

Patent Owner does direct us, however, to intrinsic evidence that demonstrates that Petitioner’s proposed construction, which equates sub and tube, is unreasonably broad. First, Patent Owner points out that the ’131 patent distinguishes between a sub and a tubing string by noting that Figure 7 depicts the former but not the latter. Prelim. Resp. 13 (“FIG. 7 can be constructed so as to allow relative rotation between sub 12, and hence, a tubing string (not shown in FIG. 7).”) (quoting Ex. 1001, 5:27–30) (Patent Owner’s emphasis). Second, Patent Owner notes that related U.S. Patent

No. 6,484,803 B1, which issued from the parent application of the '131 patent, distinguishes between a sub and tubing. Prelim. Resp. 13; *see also* Ex. 2009, Abstract (referring to “the diameter of the sub and/or the tubing to which it is mounted”). At a minimum, this evidence suggests that a sub is a particular part of, or within, a tubing string.

In light of Petitioner’s lack of evidence for its proposed construction of sub as well as Patent Owner’s intrinsic evidence to the contrary, i.e., that a sub is a particular part of, or within, a tubing string, we reject Petitioner’s proposed construction of sub. No further construction of sub is necessary for purposes of this Decision.

B. Anticipation by Hartman

Petitioner asserts that claims 1, 2, 6, and 7 are anticipated by Hartman under 35 U.S.C. § 102(b). Pet. 18–19.

Hartman discloses “centering devices used in connection with casing or pipe for centering same either in a larger casing or in a hole or well.” Ex. 1003, p. 2, left col., ll. 1–4.⁴ Figure 1 of Hartman is reproduced below, along with Figures 2–5, the positioning of which makes difficult reproduction of Figure 1 alone.

⁴ Our references to page numbers of Exhibit 1003 are to the pages numbers affixed thereto by Petitioner.

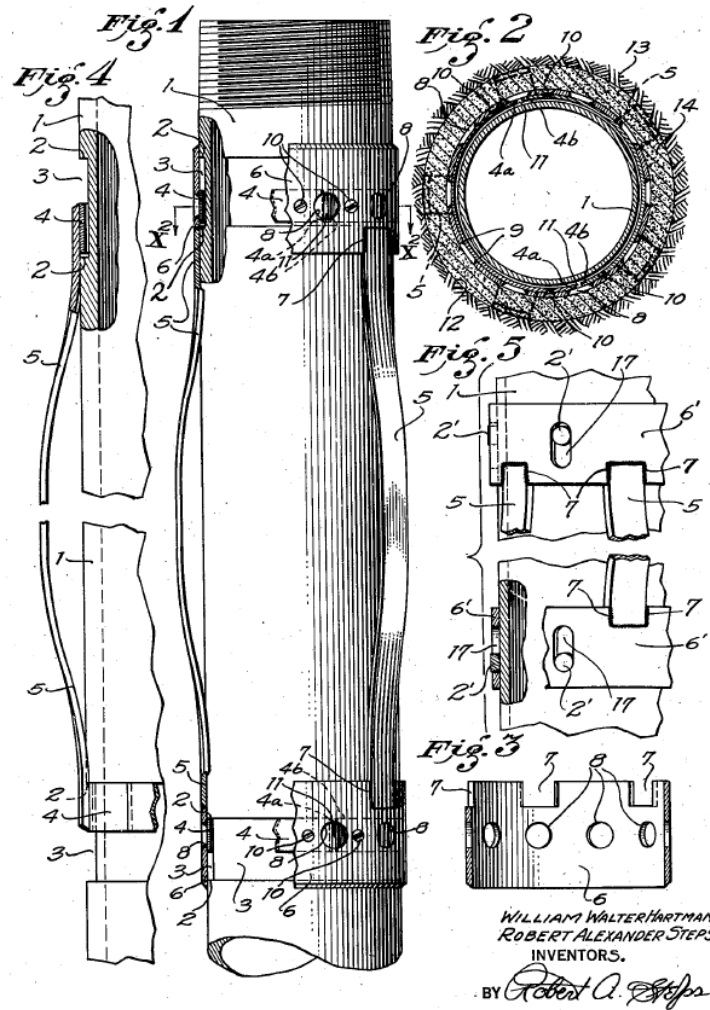


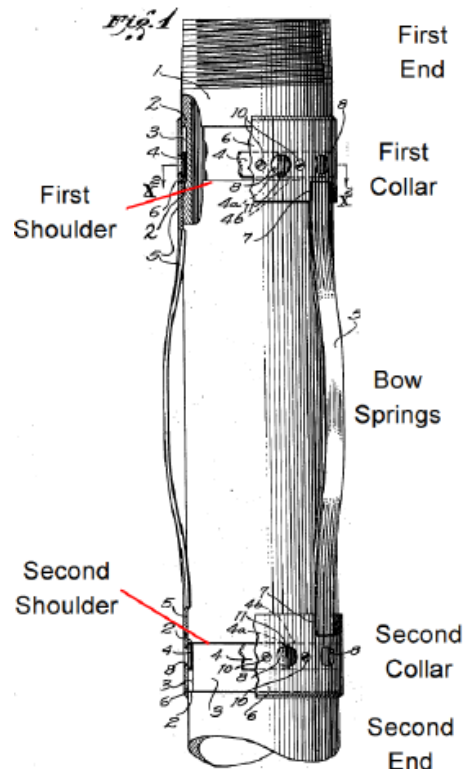
Figure 1, reproduced above, depicts a top portion of pipe 1, which is to be centered by the Hartman invention. Ex. 1003, p. 2, left col., ll. 39–40. The pipe includes two annular grooves 3, each of which includes two stops at adjacent ends 2 of the groove. *Id.* at p. 2, left col., ll. 40–44. Mounted on the pipe is a centering device formed (at least primarily) by two stop rings 4 and two cylindrical end members 6 with bow springs 5 extending therebetween. *Id.* at p. 2, left col., ll. 46–56. The cylindrical end members are also termed “collar[s].” *Id.* at p. 2, left col., l. 34.

The stop rings are rotatable and can also move axially (i.e., along the pipe) within grooves 3 but are confined by the stops at the ends of the grooves 2. *Id.* at p. 2, right col., ll. 40–49. The “stop rings 4 either are an integral part of the cylindrical end members 6 or else are rigidly fastened thereto.” *Id.* at p. 2, right col., ll. 10–12. Thus, the cylindrical end members (or collars) move with the stop rings, whether rotationally or axially.

Independent claim 1 recites a “sub having at each end thereof thread means for threadably connecting the sub in a tubing string.” Patent Owner argues that this limitation is not met by Hartman because Hartman discloses the use of a centralizer on a standard drilling pipe but not on a sub. As discussed above, Petitioner asserts that a tube (and, thus, presumably also the “pipe” of Hartman) is a sub, but Petitioner does not support its proposed construction with any evidence, and Patent Owner identifies intrinsic evidence that demonstrates that not every tubular component of a tubing string is considered a sub. On the record before us, Petitioner has not shown that Hartman teaches a sub. For this reason alone, there is not a reasonable likelihood of Petitioner prevailing in showing that claims 1, 2, 6, and 7 were anticipated by Hartner.

A further reason also precludes instituting a trial on anticipation by Hartman. Claim 1 recites a “pair of shoulders being positioned between the pair of collars.” To meet this limitation, Petitioner directs us to its annotated Hartman Figure 1, appearing on page 36 of the Petition.

Petitioner's annotated Hartman Figure 1 is reproduced at right. In it, Petitioner identifies the bottom stop 2 of upper groove 3 and the upper stop 2 of bottom groove 3 as corresponding to the shoulders of claim 1. Pet. 36. To meet the collars of claim 1, Petitioner relies on collars 6 (alternatively described as cylindrical end members). See Pet. 33, 36. But, as shown in Figure 1, these first and second collars overlap the first and second shoulders, respectively. Accordingly, Petitioner has not shown that Hartman teaches a "pair of shoulders being positioned between the pair of collars."



For the foregoing reasons, there is not a reasonable likelihood of Petitioner prevailing in showing claims 1, 2, 6, and 7 were anticipated by Hartman.

C. Obviousness in View of Hartman and Lirette

Petitioner contends that claims 1, 2, 6, and 7 would have been obvious over Hartman and Lirette. Pet. 19. In assessing obviousness, "the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved." *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

1. Lirette

Lirette teaches a centralizer bearing some resemblance to that of Hartman. Ex. 1005, Abstract, Fig. 1a.

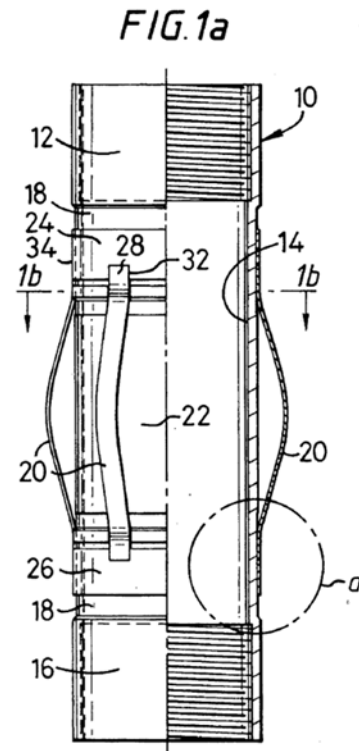
Figure 1a of Lirette is reproduced at right and shows centralizer 10 mounted on tubular body 12. Ex. 1005, 4:43–45. The centralizer has two collars 24 and 26 with bow springs 20 extending from one collar to the other collar. *Id.* at 4:52–54. First collar 24 is moveable within top collar groove 18, and second collar 26 is moveable within bottom collar groove 18. *Id.* at 4:50–52.

Lirette was cited by the examiner during the examination of the '131 patent as anticipating application claims 5, 7, 12, and 13 (corresponding to issued claims 1, 2, 6, and 7). Ex. 1002, 53–54.

In response, Patent Owner “agree[d] with the examiner that Lirette teaches the use of a shoulder to restrain movement of a collar.” *Id.* at 41. But, Patent Owner amended application claim 5 to distinguish it from Lirette. *Id.* at 41–44. More specifically, application claim 5 was amended by adding the following limitations (hereafter, “the axial movement” limitations):

the length of axial movement of the first collar when moving in the direction toward the first end of the sub being limited solely by the abutment of the second collar with the second shoulder and the compressed state of the bow springs;

the length of axial movement of the first collar when moving in the direction toward the second end of the sub being limited solely by the abutment of the first collar with the first



shoulder;

the length of axial movement of the second collar when moving in the direction toward the second end of the sub being limited solely by the abutment of the first collar with the first shoulder and the compressed state of the bow springs;

the length of axial movement of the second collar when moving in the direction toward the first end of the sub being limited solely by the abutment of the second collar with the second shoulder.

Id. at 43–44; *see also* Ex. 1001, 8:33–50 (issued claim 1 reciting the same).

In a Notice of Allowance, the examiner agreed with Patent Owner that Lirette “fails to encompass the argued and noted claim limitations requiring the ‘length of axial movement’ as ‘being limited solely’ by the abutment of the recited collar with the recited shoulder.” Ex. 1002, 31.

Petitioner argues before us that the examiner misunderstood Lirette’s teachings, and that Lirette teaches a single shoulder in contact with a collar (i.e., the other collar not contacting a shoulder) when the bow springs are fully compressed. To support this argument, Petitioner does not direct us to any of the disclosure of the Lirette patent as issued. Instead, Petitioner directs us to claim 55, which was added to Lirette during reexamination of the patent. Pet. 16–17; *see also* Ex. 1005, C1, 8:64–10:16.

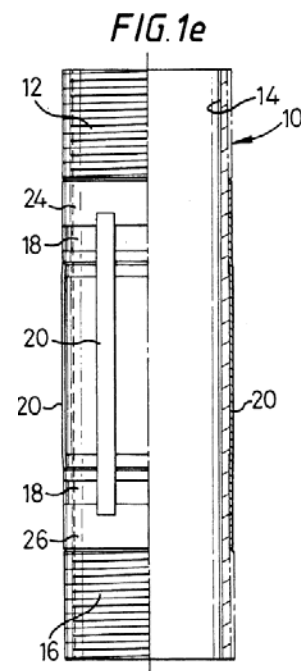
We are not persuaded by Petitioner’s argument. First, Petitioner cannot rely on the Lirette reexamination certificate without establishing that it is prior art. Petitioner correctly noted that Lirette is prior art under 35 U.S.C. § 102(b) because it issued November 19, 1996, approximately six years before the November 23, 2002, filing date of the ’131 patent. Pet. 19. The reexamination certificate, however, issued November 27, 2007, far too

late to constitute prior art to the '131 patent under 35 U.S.C. § 102(b). And, Petitioner has not identified any other provision under which it asserts the reexamination certificate would constitute prior art.

Even if the reexamination certificate were prior art to the '131 patent, which Petitioner has not established, it does not teach the specific axial movement limitations required by the challenged claims. In fact, Petitioner does not identify anything in claim 55 that purportedly meets these limitations. See Pet. 16 (referring to claim 55 in its entirety).

Patent Owner was correct, in arguing during examination of the '131 patent, that Lirette does not teach the axial movement limitations. For example, the first of those limitations recites “the length of axial movement of the first collar when moving in the direction toward the first end of the sub being limited solely by the abutment of the second collar with the second shoulder and the compressed state of the bow springs.”

Figure 1e of Lirette is reproduced at right. It shows (a) the bow springs 20 fully compressed, (b) the first collar 24 abutting an upper shoulder of the top collar groove 18, and (c) the second collar 26 abutting a lower shoulder of the bottom collar groove 18. As can be discerned from the figure, axial movement of the first collar 24 toward the first end (i.e., upward) is limited by abutment of the *first collar* with the upper shoulder of the top collar groove 18, whereas the limitation in question calls for such axial movement to be limited by abutment of the *second collar* with the



second shoulder.

2. Petitioner's Application of the Art to the Challenged Claims

We now turn away from Petitioner's discussion of the Examiner's consideration of Lirette as anticipatory and to the specific ground Petitioner raises here: obviousness in view of Hartman and Lirette. This ground is denied for two reasons.

First, Petitioner does not articulate any particular combination and/or modification of prior art elements that purportedly would have been obvious to a person of ordinary skill in the art. In other words, Petitioner has not identified any prior art construct for us to compare to the claims. *See* Pet. 46 (“Should HARTMAN be found to fail to teach any of the limitations of claim 1, LIRETTE fills in any such gaps.”).

Second, Petitioner does not provide any reasoning or rationale to make any particular combination and/or modification of prior art elements. Instead, it states “Applicable rationales include: . . .” and then repeats, without any analysis, six of the seven rationales that are provided in the Manual of Patent Examining Procedure. *Compare* Pet. 46–47, with MPEP § 2141(III).

It was Petitioner's burden to show how the claims are unpatentable. 37 C.F.R. § 42.104(b)(4). Petitioner has not done so. Accordingly, there is not a reasonable likelihood of Petitioner prevailing in showing claims 1, 2, 6, and 7 would have been obvious over Hartman and Lirette.

III. CONCLUSION

There is not a reasonable likelihood that Petitioner would prevail with

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respect to any of claims challenged. *See* 35 U.S.C. § 314(a); 37 C.F.R.
§ 42.108.

IV. ORDER

Accordingly, it is

ORDERED that the Petition is denied.

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