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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

TESCO CORPORATION
Requester and Cross-Appellant

v.

Patent of WEATHERFORD/LAMB, INC.
Patent Owner and Appellant

Appeal 2011-003489
Reexamination Control 95/001,117
Patent 7,213,656 B2
Technology Center 3900

Before MICHAEL P. TIERNEY, RICHARD M. LEBOVITZ, and
DANIEL S. SONG, *Administrative Patent Judges*.

LEBOVITZ, *Administrative Patent Judge*.

DECISION ON APPEAL

Appeal 2011-003489
Reexamination Control 95/001,117
Patent 7,213,656 B2

This is a decision on appeal in an *inter partes* reexamination of U.S. Patent No. 7,213,656 B2. The Patent Owner appeals the Examiner's decision to reject claims as obvious under 35 U.S.C. § 103. The Third-Party Requester appeals the Examiner's decision not to adopt proposed obviousness rejections. The Board's jurisdiction for this appeal is under 35 U.S.C. §§ 6(b), 134, and 315. We affirm-in-part and reverse-in-part.

STATEMENT OF THE CASE

The patent in dispute in this appeal is U.S. Patent No. 7,213,656 B2 (hereinafter, "the '656 patent"), which issued May 8, 2007.

A request for *inter partes* reexamination of the '656 patent was filed on November 18, 2008, by a Third-Party Requester under 35 U.S.C. §§ 311-318 and 37 C.F.R. §§ 1.902-1.997 (Request for *Inter Partes* Reexamination). The Third-Party Requester is Tesco Corporation (hereinafter, "Tesco") (Tesco Appellant's Br. 1, dated June 23, 2010). The Patent Owner is Weatherford/Lamb, Inc. (hereinafter, "Weatherford") (Weatherford App. Br. 1, dated June 24, 2010). An oral hearing was held March 16, 2011. Arguments were heard only from Weatherford. A transcript of the hearing will be entered into the record when it becomes available.

The claims of the '656 patent involve methods and an apparatus for connecting tubular casings in the construction of oil or gas wells ('656 patent, col. 1, ll. 24-32). Weatherford appeals the Examiner's rejection of claims 6, 7, 21, and 22 (Weatherford App. Br. 1). Tesco appeals the Examiner's refusal to adopt certain rejections of claims 3, 10, 11, 24, 25, 36, and 48 (Tesco Appellant's Br. 1). There are other pending and rejected

claims of the '656 patent, but these claims are not involved in this appeal (Ans., Cover Page, mailed Sept. 17, 2010).

There are five rejections involved in this appeal. Two were proposed by Tesco but not adopted by the Examiner; three were proposed by Tesco and adopted by the Examiner. These rejections are as follows:

1. Tesco appeals the Examiner's decision not to adopt the rejection of claims 3, 10, 11, 24, 25, 36, and 48 under 35 U.S.C. § 103(a) as obvious in view of Delano¹ and Willis² (Tesco Appellant's Br. 12, dated June 23, 2010).

2. Tesco appeals the Examiner's decision not to adopt the rejection of claims 3, 10, 11, 24, 25, 36, and 48 under 35 U.S.C. § 103(a) as obvious in view of Willis and Brisco³ or Hawkins⁴ (*id.* at 15).

3. Claims 6, 7, 21, and 22 stand rejected by the Examiner under 35 U.S.C. § 103(a) as obvious in view of Willis, Brisco, and Hawkins (Right of Appeal Notice ("RAN") 9, dated December 18, 2009 and incorporated by reference in the Examiner's Answer).

4. Claims 6, 7, 21, and 22 stand rejected by the Examiner under 35 U.S.C. § 103(a) as obvious in view of Delano and Willis (RAN 11).

5. Claims 6, 7, 21, and 22 stand rejected by the Examiner under 35 U.S.C. § 103(a) as obvious in view of Willis, Delano, and Hawkins (RAN 14).

¹ U. S. Patent No. 4,100,968 issued July 18, 1978.

² U.S. Patent No. 5,036,927 issued Aug. 6, 1991.

³ U.S. Patent No. 5,501,280 issued Mar. 26, 1996.

⁴ U.S. Patent No. 5,918,673 issued July, 6, 1999.

Claims 1, 3, and 6 are reproduced below for reference (underlining indicates amendments made during reexamination). The remaining claims are listed in the '656 patent or in the Claims Appendix A to Weatherford Respondent App. Br., dated July 23, 2010.

1. A method of connecting a first casing to a second casing using a top drive, comprising:
coupling a first gripping apparatus to the top drive, the first gripping apparatus having a first radially movable gripping element adapted to engage an exterior surface of the first casing and a seal for sealing between the gripping apparatus and an inner diameter of the casing;
actuating the first radially movable gripping element to engage the exterior surface of the first casing;
actuating the top drive to rotate the first gripping apparatus and the first casing relative to the second casing thereby connecting the first casing to the second casing;
pumping a fluid through the gripping apparatus into the casing; and
actuating the seal with a fluid pressure inside the casing.

3. The method of claim 1, wherein the first gripping apparatus further comprises a second radially movable gripping element [engages] adapted to engage an interior surface of the first casing.

6. The method of claim 1, further comprising aligning the first casing to the second casing by moving the first gripping apparatus in a substantially horizontal plane relative to the top drive.

1-2. OBVIOUSNESS REJECTIONS – NOT ADOPTED
Issue

Would the ordinary skilled worker have had reason to combine the external and internal gripping devices described in Willis in a single apparatus and method using the apparatus to connect casings?

Findings of Fact⁵ (“FF”)

FF1

The left and right hand sides of FIG. 2 show the tubular engaging apparatus **30** in two positions. . . . Because the T-shaped slots **48** of the guides **44** diverge upwardly, this causes the engaging members **50** to move radially outwardly as they move upwardly, thereby disengaging the toothed cylindrical faces **52** from the exterior surface of the tubular T.

(Willis, col. 4, ll. 10-21.)

FF2

This invention is not limited to embodiments that grip the exterior of the tubular T. FIGS. 3 and 3a show a second preferred embodiment that is designed to fit into the interior of the tubular T to grip the interior wall. . . . Each of the engaging members **150** defines a respective toothed cylindrical face **152** shaped to engage the interior of the tubular T.

. . .

The operation of the second preferred embodiment **130** is similar to that described above. The right hand side of FIG.3 shows the actuating member **162** in the raised or opened position in which the engaging members **150** are raised and shifted radially inwardly by the T-shaped slots **148** to release

⁵ Additional findings of fact are found in the Analysis section below, e.g., as indicated by the bracketed numbering.

the tubular T. The left hand side of FIG. 3 shows the actuating member **162** in the lower or closed position in which the downward force supplied by the wrench assembly **24** via the bearing element 64 presses the actuating member **162** and therefore the engaging members **150** downwardly and radially outwardly, into frictional engagement with the interior surface of the tubular T.

(Willis, col. 4, ll. 47-68 & col. 5, ll. 16-28.)

Analysis

Tesco contends that the Examiner erred in not adopting the rejection of claim 3 and others which involve an apparatus comprising a *first* radially movable gripping element engaging the *exterior* surface of a casing and a *second* radially movable gripping element for engaging the *interior* surface of the casing. Tesco argues:

In addition, Willis '927, like Delano '968, is directed to connecting threaded tubulars end to end using torque - the more torque applied the stronger and faster the connection can be made. Thus, using internal and external clamping tools permits the application of more torque and thereby allowing faster connections.[] Thus, within the general area of technology, a person of ordinary skill in the art would know that more applied torque equals faster and better threaded connections - such a thought process would have been obvious to persons having ordinary skill in the art viewing Willis '927.

(Tesco Appellant's Br. 13.)

Weatherford contends the Examiner's position is correct. First, Weatherford contends that there is no suggestion in the prior art to have combined internal and external grippers in the same apparatus (Weatherford Respondent Br. 4). Second, Weatherford contends that it was not "possible"

to combine the internal and external gripping members described by Willis into a single apparatus (*id.* at 3-4). Third, Weatherford argues:

Further, Tesco is erroneous when it argues that using an internal and external gripper at the same time would result in the application of more torque and a faster connection. There is no technical basis for Tesco's argument that additional grippers will apply additional torque, and Tesco has not provided one. Specifically, rotation, and thus torque, is supplied by the top drive. Final torque values are directly dependent on the top drive's ability to rotate the casing. As long as a single gripping element engages the pipe sufficiently, the desired torque will be applied. Similarly, the speed of a completing a connection is wholly independent of the location of the gripping elements.

(*Id.* at 5.)

The Examiner erred in not adopting the rejections. As acknowledged by Weatherford, “[a]s long as a single gripping element engages the pipe sufficiently, the desired torque will be applied.” (*Id.*) Persons of ordinary skill in the art would have recognized that providing exterior *and* interior gripping elements would enhance the frictional engagement to the tubular casing, permitting the top drive to deliver the maximum amount of torque (“more torque”) when making the threaded connections. Simply put, placing two gripping elements on the casing would have produced a firmer grip, enabling the application of the maximal amount of torque. As argued by Tesco, it “is obvious to arrange old elements, with each performing the same function it had been known to perform . . . *Sakraida v. AG Pro, Inc.*, 425 U.S. 273, 282 (1976).” (Tesco Rebuttal Br. 4, dated Oct. 18, 2010).

An express suggestion to combine the prior art is unnecessary to establish obviousness of a claimed invention. *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007); *In re Kahn*, 441 F.3d 977, 987-988 (Fed. Cir.

2006). The pertinent issue is whether the skilled worker would have had a reason to combine the prior art. *KSR*, 550 U.S. at 418. Here, providing interior and exterior gripping elements would have improved the ability to grip the casing, an adequate reason for combining the elements in a single apparatus.

Weatherford's attorney argument that it was not "possible" to combine the interior and exterior gripping elements is not supported by objective evidence. "Argument of counsel cannot take the place of evidence lacking in the record." *Meitzner v. Mindick*, 549 F.2d 775, 782 (CCPA 1977). Weatherford improperly focused on the single element configurations disclosed in Willis, without adequately addressing the level of skill in the art. As evidenced by each of the four different cited publications, the skilled worker was experienced in designing apparatuses for drilling rigs. Weatherford did not provide adequate evidence that the skilled drilling rig designer would not have been able to routinely produce an apparatus with both gripping types described in the Willis patent. (*See Tesco Rebuttal Br. 4*).

3-5. OBVIOUSNESS REJECTIONS – ADOPTED

Claim 6

Claim 6 is directed to the method of claim 1, "further comprising aligning the first casing to the second casing by moving the first *gripping apparatus* in a substantially horizontal plane relative to the top drive." (Emphasis added.) In each of the rejections, the Examiner relied upon Willis's teaching of horizontally movable *gripping elements* ("radially

outwardly”) to meet this limitation (RAN 10, 12, & 15). Weatherford contends that the Examiner did not establish that the cited prior art described or suggested “moving the first gripping apparatus in a substantially horizontal plane relative to the top drive” as recited in the claim (Weatherford App. Br. 4-6).

The issue in these rejections is whether Willis’s radially engaging member constitutes a “gripping apparatus” as recited in the claims. The term “gripping apparatus” is not defined in the ‘656 patent. Consequently, we adopt its ordinary dictionary meaning as it would be understood by the skilled worker in light of the ‘656 patent’s written description. In this case, an apparatus is defined as “a set of materials or equipment designed for a particular use.”⁶ Consequently, the claimed “gripping apparatus” would be understood to mean not only the radially engaging member 50 described in Willis (col. 4, ll. 14-17) [FF3], but also the additional structures used to accomplish its movement. In this case, Willis depicts structures 58 and 62 attached to the member 50 (col. 4, ll. 14-30; Fig. 2) [FF4] which are involved in the movement of the engaging member and therefore would be considered to constitute the “gripping apparatus.” The Examiner did not establish that such structures, which are part of the gripping apparatus as a whole, move in a horizontal plane as required by the claim. Since the Examiner did not meet the burden, we reverse the rejections of claim 6.

Claim 7

⁶ “1a: a set of materials or equipment designed for a particular use” available at <http://www.merriam-webster.com/dictionary/apparatus>, accessed March 25, 2011.

Claim 7 is drawn to the method of claim 1, “further comprising rotating the first casing and the second casing to form a borehole.”

We reverse these rejections. The Examiner did not identify disclosure in the cited prior art where a borehole was formed comprising rotating the first and second casings. Tesco points to the following descriptions in the Willis and Delano patents for the latter limitation:

See, e.g., Willis at col. 4, lines 10-46, and Figs. 2a-2c. As a result, during operation, first and second tubulars, which may be drill pipes or casings, are rotated by the drilling machine 10 of Willis to form a borehole. Thus, Willis discloses rotating first and second casings to form a borehole. []

...

Furthermore, Delano also discloses rotating the first and second casing to form a borehole. In particular, Delano discloses a drilling rig 10 that includes a rotating tool 42 having a hydraulic motor 72, a slip section 44, a tong section 46, and a seal assembly 48 for rotating, gripping the interior of, and sealing to the interior of, a casing 34. See, e.g., Delano at col. 2, line 67 to col. 7, line 40, and Figs. 1-5. The slip assembly 44 includes radially movable slip segments, 126 and 128, for gripping the casing 34. See, e.g., Delano at col. 4, lines 45-68, and Figs. 1 and 3. The tong section 46 includes radially movable tong dies 168, 170 for gripping the casing 34. See, e.g., Delano at col. 5, lines 16-34, and Figs, 1 and 4. During operation, first and second tubulars, which may be drill pipes or casings, are rotated by the rotating tool 42 to form a borehole. Thus, Delano discloses rotating first and second casings to form a borehole.

(Tesco Respondent’s Br. 7, dated July 23, 2010.)

We have reviewed the cited portions of Willis and Delano. These sections describe rotating a casing, but not “to form a borehole” as recited in the claim. As argued by Weatherford, Tesco’s statement that the casings are

rotated to form a borehole is not supported by the cited evidence (Weatherford Rebuttal Br. 10, dated Oct. 18, 2010).

Claim 21

Claim 21 depends on claim 19, which in turn depends on independent claim 17. Claim 21 recites “further comprising rotating the first casing and the second casing.”

The only disclosure pointed to by Tesco (Tesco Respondent’s Br. 9) which discloses rotating a string of casings appears in Delano at column 7, lines 4-8, reproduced as follows [FF5]:

In the event the well begins to blow out when the equipment **36** is inserted in the casing joint **34**, immediate pumping of mud may be commenced. Until the blowout preventer rams are closed, rotation of the casing string **24** can be effected by the rotating tool **42**.

Weatherford simply denied that claim limitation was described in the cited prior art, but did not specifically address the Delano disclosure in which rotation of the casing string was described (FF5) (Weatherford Rebuttal Br. 11-12). Because this limitation is described in Delano, we affirm the obviousness rejections 4 and 5 of claim 21 which cite the Delano patent. However, we reverse rejection 3 which relies on Willis, Brisco, and Hawkins; sufficient evidence was not presented that casing rotation was described in any of these three publications.

Claim 22 depends on claim 21, and therefore falls with claim 21 in rejections 4 and 5, which are affirmed; claim 22 stands with rejection 3, which is reversed.

SUMMARY

We reverse the Examiner's decision not to adopt the rejection of claims 3, 10, 11, 24, 25, 36, and 48 under 35 U.S.C. § 103(a) as obvious in view of Delano and Willis (Rejection 1).

We reverse the Examiner's decision not to adopt the rejection of claims 3, 10, 11, 24, 25, 36, and 48 under 35 U.S.C. § 103(a) as obvious in view of Willis and Brisco or Hawkins (Rejection 2).

We reverse the obviousness rejections 3-5 of claims 6 and 7.

We reverse the obviousness rejection 3 of claims 21 and 22, but affirm the obviousness rejections 4 and 5 of claims 21 and 22.

NEW GROUNDS OF REJECTION

37 C.F.R. § 41.77(a) states that “[t]he reversal of the examiner’s determination not to make a rejection proposed by the third party requester constitutes a decision adverse to the patentability of the claims which are subject to that proposed rejection which will be set forth in the decision of the Board of Patent Appeals and Interferences as a new ground of rejection”

37 C.F.R. § 41.77(b) states:

(b) Should the Board reverse the examiner’s determination not to make a rejection proposed by a requester, the Board shall set forth in the opinion in support of its decision a new ground of rejection; or should the Board have knowledge of any grounds not raised in the appeal for rejecting any pending claim, it may include in its opinion a statement to that effect with its reasons for so holding, which statement shall constitute a new ground of rejection of the claim. Any decision which includes a new ground of rejection pursuant to this paragraph shall not be considered final for judicial review. When the Board makes a

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new ground of rejection, the owner, within one month from the date of the decision, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal proceeding as to the rejected claim:

(1) *Reopen prosecution.* The owner may file a response requesting reopening of prosecution before the examiner. Such a response must be either an amendment of the claims so rejected or new evidence relating to the claims so rejected, or both.

(2) *Request rehearing.* The owner may request that the proceeding be reheard under § 41.79 by the Board upon the same record. The request for rehearing must address any new ground of rejection and state with particularity the points believed to have been misapprehended or overlooked in entering the new ground of rejection and also state all other grounds upon which rehearing is sought.

Requests for extensions of time in this *inter partes* reexamination proceeding are governed by 37 C.F.R. § 1.956. *See* 37 C.F.R. § 41.79.

AFFIRMED-IN-PART; REVERSED-IN-PART; 37 C.F.R. § 41.77(b)

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