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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MICHAEL BOYD, SERG ARABSKY, and
ANDREW BARABASH

Appeal 2019-001105
Application 15/315,944
Technology Center 3600

Before DANIEL S. SONG, BENJAMIN D. M. WOOD, and
LISA M. GUIJT, *Administrative Patent Judges*.

GUIJT, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1, 3–13, 15–17, and 19. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as WEATHERFORD TECHNOLOGY HOLDINGS, LLC. Appeal Br. 3.

CLAIMED SUBJECT MATTER

The claims are directed to “devices for managing downhole fluid pressures in offshore drilling, and more particularly to a riser pipe section with an internal rotating flow control devices.” Spec. ¶ 1. Claims 1, 13, and 16 are the independent claims on appeal. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A system for securing a rotating flow control device (“RFCD”) within a riser string, the system comprising:
 - a riser pipe section configured to connect in the riser string;
 - wherein the riser pipe section comprises a latch assembly, the latch assembly comprising at least one lock member which displaces radially inward and thereby secures the RFCD within the riser string;
 - wherein the riser pipe section comprises at least one seal assembly secured within the riser pipe section, the seal assembly comprising a circumferential seal element which seals radially inward against the RFCD when the seal assembly is actuated; and
 - wherein the seal assembly comprises a seal actuation piston slidably disposed within the seal assembly, the seal actuation piston comprising a linear cam which converts axial movement of the piston into a compressive force of the seal element against the RFCD.

REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Nas	US 2012/0000664 A1	Jan. 5, 2012

REJECTION

- I. Claims 1, 3–5, 8–13, 15–17, and 19 stand rejected under 35 U.S.C. § 102(a)(1) as anticipated by Nas.

- II. Claims 6 and 7 stand rejected under 35 U.S.C. § 103 as unpatentable over Nas.

OPINION

Rejection I: Anticipation by Nas

To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either expressly or inherently. *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1341 (Fed. Cir. 2016). *Independent claim 1 and claims 3–5 and 8–12 depending therefrom*

Regarding independent claim 1, the Examiner finds that Nas discloses, *inter alia*, a riser pipe section comprising at least one seal assembly (i.e., active packer seal 22) having a seal actuation piston with a linear cam (i.e., second retainer member 20) which converts axial movement of the piston into a compressive force of the seal element against the RFCD, as claimed. Final Act. 2 (citing Nas, Fig. 1); *see also* Ans. 4–5 (citing Nas ¶¶ 70, 71, Fig. 1) (finding that retaining members 20 of Nas correspond to the claimed linear cam and are activated by a seal actuation piston); Adv. Act. (citing Nas ¶¶ 72, 86, 87). The Examiner also finds “retainer members 218' are activated by annular piston 220',” which “clarifies what is happening in Figure 1” and “supports the conclusion that the seal actuation piston and cam are disclosed by Nas.” Ans. 5 (citing Nas ¶ 137, Fig. 11).

Appellant argues correctly that Nas discloses “an *inflatable* active seal 22,” which does not employ a seal actuation piston with a linear cam for converting axial movement of the piston into a compressive force of the seal element against the RFCD, as required by claim 1. Appeal Br. 11; *see also* Reply Br. 12; Nas ¶ 65 (disclosing that active seal 22 is actuated “by supplying hydraulic fluid to . . . active seal 22 . . . when practical”). We also

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agree with Appellant’s submission that “retainer member 20 is part of a *latching* assembly,” which is “operated by the latching piston 18,” and that “retainer member 20 is not used with any sort of the *seal* assemblies . . . described by Nas.” Reply Br. 12–13 (citing Nas ¶ 71, Fig. 1). We further agree with Appellant’s submission that

Nas describes that the retainer members (16, 20) act to squeeze or compress the RCD [rotating control device] 2, either between the retainer members (16, 20) or radially inwardly However, this is *not* a disclosure by Nas that either of the retainer members (16, 20) forms a *seal* with the RCD2. Nas instead describes that, in their second or latched positions, retainer members (16, 20) block and *latchingly engage* the RCD 2, respectively, *to resist vertical movement and rotation*

Id. (citing Nas ¶ 69).

Similarly, retainer member 218', with reference to Figure 11, “extends radially inwardly from the latch assembly 210', engaging a latching formation 216' in [RCD] 100', latching the [RCD] 100' with the latching assembly 210'.” Nas ¶ 137. In other words, Nas discloses that retainer member 218' resists the movement of RCD 100' relative to housing section 200', and a preponderance of evidence fails to support the Examiner’s conclusion that Nas’ disclosure of retainer member 218' teaches a seal actuation piston, as required by claim 1.

Thus, the Examiner erred by relying on Nas’ retainer members as corresponding to the linear cam of the claimed *seal* actuation piston.

Accordingly, we cannot sustain the Examiner’s rejection of independent claim 1, and claims 3–5 and 8–12 depending therefrom.

Independent claim 13 and claim 15 depending therefrom

Regarding independent claim 13, the Examiner finds that Nas discloses, *inter alia*, an RCD 2, wherein the outer housing of RCD 2

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comprises a circumferential groove which receives a radially moveable lock dog (i.e., the latching system) and a second circumferential groove which receives a moveable sealing member (i.e., active packer seal 22). Final Act. 4 (citing Nas, Fig. 1). The Examiner relies on Nas' disclosure that "[w]hile active seal 22 is illustrated positioned with the housing 12, it is contemplated that the seal, active or passive, could instead be positioned with the outer surface of the RCD 2" (Nas ¶ 70) to conclude that "the groove can be in either location." Ans. 8.

Appellant argues correctly that

Nas does not describe an outer housing of the RCD 2 that includes a circumferential groove *which receives at least one radially moveable sealing member*. Instead, Nas describes that the active seal 22, when inflated sealingly engages the outer diameter 31 of the RCD 2. Thus, the radially moveable active seal 22 does not engage any circumferential groove on the RCD 2.

Appeal Br. 13; Reply Br. 16. Appellant also contends correctly that

[i]t certainly is not inherent that the active seal 22 would necessarily be received in a circumferential groove if it were to be "positioned with" the outer surface of the RCD 2. In addition, the manner in which the active seal 22 would be hydraulically inflated if it were to be "positioned with" the outer surface of the RCD 2 is not described by Nas, and so this configuration of the active seal is merely left the imagination.

Reply Br. 17.

Thus, we agree with Appellant that the Examiner's finding that Figure 1 of Nas depicts a circumferential groove in RCD 2 for receiving active packing seal 22 is speculative. *See, e.g.,* Nas ¶¶ 64, 65, 70–72, Fig. 1.

According, we cannot sustain the Examiner's rejection of independent claim 13, and claim 15 depending therefrom.

Independent claim 16 and claims 17 and 19 depending therefrom

Regarding independent claim 16, the Examiner finds that Nas discloses, *inter alia*, a method comprising the step of lowering an RCD into a riser pipe section, wherein the RCD comprises a collet and the riser pipe section comprises a collet locating member (i.e., blocking shoulder 11 of RCD 2). Final Act. 3, 4 (citing Nas ¶ 71, Fig. 1). In particular, the Examiner finds that Nas discloses that “retainer member 16” is a collet. Ans. 9.

Appellant argues correctly that claim 16 requires *the RFCD* (or RCD) to comprise a collet, however, Nas’ “retainer member 16 is part of housing 12.” Reply Br. 18; *see, e.g.*, Nas. ¶ 69 (“first member 16 blocks the downward movement of the RCD 2 during landing by contacting RCD blocking shoulder 11, resulting from the change between upper RCD outside diameter 9 and lower RCD outside diameter 31”). Indeed, blocking shoulder 11, which the Examiner finds corresponds to the claimed *collet locating member*, is a part of RCD 2, whereas first member 16, which the Examiner finds corresponds to the claimed collet, is *not* part of RCD 2; nor has the Examiner established that blocking shoulder 11 meets the definition of “a collet,” as claimed.

Accordingly, we cannot sustain the Examiner’s rejection of claim 16 and, claims 17 and 19 depending therefrom.

Rejection II: Obviousness over Nas

The Examiner’s reliance on Nas in the rejection of dependent claims 6 and 7, which recite limitations involving a seal activation and relief chambers and third and fourth ports do not cure the deficiencies in the

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Examiner's reliance on Nas for disclosing the limitations of independent claim 1, as discussed *supra*.

Accordingly, we do not sustain the Examiner's rejection of claims 6 and 7.

CONCLUSION

The Examiner's rejection of claims 1, 3-5, 8-13, 15-17, and 19 under 35 U.S.C. § 102(a)(1) is REVERSED.

The Examiner's rejection of claims 6 and 7 under 35 U.S.C. § 103 is REVERSED.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 3-5, 8-13, 15-17, and 19	102(a)(1)	Nas		1, 3-5, 8-13, 15-17, and 19
6 and 7	103	Nas		6 and 7
Overall Outcome				1, 3-13, 15-17, and 19