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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TODD ANTHONY STAIR

Appeal 2020-001678
Application 15/540,978
Technology Center 3600

Before JENNIFER D. BAHR, MICHELLE R. OSINSKI, and
SEAN P. O’HANLON, *Administrative Patent Judges*.

O’HANLON, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ appeals under 35 U.S.C. § 134(a) from the Examiner’s decision to reject claims 1–20. We have jurisdiction over this appeal under 35 U.S.C. § 6(b). We AFFIRM.

In explaining our Decision, we refer to the Specification filed June 29, 2017 (“Spec.”), the Final Office Action mailed May 30, 2019 (“Final Act.”), the Appeal Brief filed September 11, 2019 (“Appeal Br.”), the Examiner’s

¹ We use the term “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Halliburton Energy Services, Inc. Appeal Br. 3.

Answer mailed November 13, 2019 (“Ans.”), and the Reply Brief filed December 31, 2019 (“Reply Br.”).

SUMMARY OF THE INVENTION

Appellant’s claimed invention relates to downhole tools. Spec. ¶ 10. Claims 1, 8, and 15 are independent. Claim 1, reproduced below from page 12 (Claims Appendix) of the Appeal Brief, is illustrative of the claimed subject matter:

1. A valve assembly comprising:
 - a flapper valve biased to move from a restrained position to a released position to cover an entry bore;
 - an activating sleeve retaining the flapper valve in the restrained position and having a shoulder, wherein the shoulder comprises an upper face in a radial plane and a frustoconical lower face;
 - an upper radial lock mechanism that prevents movement of the shoulder toward the entry bore and past the upper radial lock mechanism, wherein the upper radial lock mechanism comprises an upper lock ring; and
 - a lower radial lock mechanism positioned axially between the shoulder and an exit bore when the flapper valve is in the restrained position, the lower radial lock mechanism preventing movement of the shoulder toward the exit bore and past the lower radial lock mechanism until a force threshold is exceeded, wherein the lower radial lock mechanism comprises a lower lock ring.

REFERENCES

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

Freeman	US 4,474,241	Oct. 2, 1984
Kippola	US 2014/0299329 A1	Oct. 9, 2014

REJECTIONS

- I. Claims 1–20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Freeman and Kippola.
- II. Claims 1–20 stand provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1–20 of U.S. Patent Application No. 15/542,402.

ANALYSIS

Rejection I – Obviousness based on Freeman and Kippola

In contesting this rejection, Appellant presents arguments for independent claims 1, 8, and 15 together (*see* Appeal Br. 7–9) and relies on the same arguments for dependent claims 2–7, 9–14, and 16–20 (*see id.* at 9). We select claim 1 as representative, and claims 2–20 stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2019).

The Examiner finds that Freeman discloses a valve assembly substantially as recited in claim 1, including, in relevant part, an upper radial lock mechanism (shear pins 150, shear screw 152) and a lower radial lock mechanism (split lock ring 156), but “does not explicitly disclose that the upper radial lock mechanism comprises an upper lock ring.” Final Act. 3. The Examiner finds that Kippola teaches a retention member in the form of shear screw 62 and further teaches that “one of ordinary skill in the art will appreciate that the retention member 62 may be shear pins, lock rings, snap rings, or any other like component capable of retaining the lower piston in the initial position.” *Id.* at 3–4 (citing Kippola ¶ 38). The Examiner determines that it would have been obvious

to have substituted a lock ring for Freeman’s upper radial lock mechanism[,] as taught by Kippola. As Freem[a]n teaches the

use of a lock ring, the simple substitution of a lock ring for Freeman's upper radial lock mechanism would have been within [the level of] routine skill [in the art]. As the art teaches that lock rings can be substituted for shear pins and shear screws, such a simple substitution would have been predictable with a reasonable expectation of success.

Id. at 4.

Appellant argues that "substituting the shear pins and shear screws in Freeman with a lock ring would render the Office's proposed valve assembly inoperable." Appeal Br. 8. Appellant asserts that "Freeman uses shear pins and shear screws for two purposes. The first is to hold the activating sleeve to the housing. The second use is to maintain the alignment of the activating sleeve while the sleeve moves down the housing before contacting the double flapper valve." *Id.* According to Appellant,

substituting shear pins and shear screws with a lock ring would eliminate the rotation control mechanism provided by the shear pins and shear screws. This [would] allow[] the activating sleeve to move out of alignment with the fill up flapper during longitudinal motion down the housing which leads to jamming of the valve assembly. Thus, without the use of a shear pin or shear screw as disclosed by Freeman, the valve assembly of Freeman would be inoperable as a lock ring provides no mechanism for rotation control.

Id. at 9. The Examiner responds that

Freeman discloses two potential structures (150, 152) that each, individually, provide the claimed movement prevention, [and] it would have been within [the level of] routine skill [in the art] to understand that a split lock ring (as explicitly taught by Kippola) would only need to be substituted for pins 150 and that a split ring would still allow the use of guide pins 152 (i.e. the split in the lock ring can accommodate the guide pins 152). Thus, contrary to appellant's[] arguments, the substitution of Kippola's lock ring for Freeman's pins 150 would in no way prevent the intended function of Freeman.

Ans. 5. In this regard, Appellant does not persuasively refute the Examiner's position.

Freeman discloses that “[a]ctivating sleeve 130 is prevented from rotating prior to contacting valve assembly 170 by the head 154 of shear screw 152 riding in slot 100.” Freeman, 5:64–66. Given that the Examiner's proposed modification of Freeman would involve replacing *only* shear pins 150 with a split lock ring (*see* Ans. 5), it appears that head 154 of shear screw 152 would still prevent rotation of activating sleeve 130. Thus, we are unpersuaded by Appellant's contention that the proposed modification of Freeman's valve assembly would render it inoperable. *See* Appeal Br. 8.

Appellant argues that “[t]he current application discloses a variety of issues associated with the use of shear pins and shear screws in valve assemblies.” Reply Br. 3. According to Appellant, “incorporating a lock ring in place of some of the shear pins while maintaining use of the shear screw, still incurs the operational disadvantages associated with the use of shear pins and shear screws.” *Id.* at 4. We are not persuaded by this argument.

Although the Specification describes that there are drawbacks associated with shear *pins* (*see, e.g.*, Spec. ¶ 11), the Specification is silent as to shear *screws*. Nevertheless, even assuming, *arguendo*, that the described shear pin drawbacks also apply to shear screws, Appellant's argument does not identify error in the Examiner's conclusion of obviousness. Our reviewing court has recognized that “a given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine.” *See Medichem, S.A. v.*

Rolabo, S.L., 437 F.3d 1157, 1165 (Fed. Cir. 2006); *Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 n.8 (Fed. Cir. 2000) (“The fact that the motivating benefit comes at the expense of another benefit, however, should not nullify its use as a basis to modify the disclosure of one reference with the teachings of another. Instead, the benefits, both lost and gained, should be weighed against one another.”).

Appellant has not provided any factual evidence or persuasive technical reasoning to explain why modifying Freeman’s valve assembly to replace shear pins 150 with a split lock ring, as taught by Kippola, would yield anything other than a predictable result, or that doing so in an operable manner would be beyond the level of ordinary skill in the art, especially given Kippola’s disclosure that “one o[f] ordinary skill in the art will appreciate that the retention members 62 may be shear pins, lock rings, snap rings, or any other like component capable of retaining the lower piston 48 in the initial position.” Kippola ¶ 38. In this regard, the Examiner’s proposed modification of Freeman does not amount to more than the simple substitution of one known retention member (i.e., Freeman’s shear pins 150) for another (i.e., Kippola’s lock ring) or the mere application of a known technique to a piece of prior art ready for the improvement. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007).

For the above reasons, Appellant does not apprise us of error in the Examiner’s determination that the subject matter of claim 1 would have been obvious. Accordingly, we sustain the rejection of claim 1, and of claims 2–20 falling therewith, as being unpatentable over Freeman and Kippola.

Rejection II – Non-statutory Double Patenting

The Examiner provisionally rejected claims 1–20 on the ground of non-statutory double patenting as being unpatentable over claims 1–20 of Application No. 15/542,402, which is now US 10,633,948 B2, issued April 28, 2020. Final Act. 7. At least some of the claims relied upon in the provisional rejection have been amended since the rejection was initially made by the Examiner. *See* Application No. 15/542,402, Amdt. (Sept. 24, 2019). We decline to reach this rejection because the claims now relied upon are not clearly the same as those originally considered by the Examiner when the rejection was initially made. *See Ex parte Jerg*, Appeal No. 2011-000044, at 5–6 (BPAI Apr. 17, 2012) (designated informative) (“Panels have the flexibility to reach or not reach provisional obviousness-type double-patenting rejections.”) (citing *Ex parte Moncla*, Appeal No. 2009-006448 (BPAI June 22, 2010) (designated precedential)).

CONCLUSION

In summary,

Claims Rejected	35 U.S.C. §	References/Basis	Affirmed	Reversed
1–20	103	Freeman, Kippola	1–20	
1–20		Provisional Non-statutory Double Patenting ²		
Overall Outcome			1–20	

² As discussed above, we do not reach this rejection.

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

AFFIRMED