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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ERIC M. SUTLIFF, KERNEK E. McDONALD,
DAVID M. BARTLEY, and BILLY R. BREEDEN

Appeal 2010-012063
Application 11/278,927
Technology Center 3700

Before JAMES P. CALVE, NEIL T. POWELL, and
JEREMY M. PLENZLER, *Administrative Patent Judges*.

POWELL, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1 and 3-13. We have jurisdiction over this appeal under 35 U.S.C. § 6(b).

We REVERSE.

THE CLAIMED SUBJECT MATTER

Independent claim 1, reproduced below, is illustrative of the appealed subject matter:

1. A sealing member for a dual chamber orifice fitting, rotatable from a first position wherein the sealing member seals the two chambers from each other and a second position wherein the two chambers are in fluid communication with each other, the sealing member comprising:

an eccentric elongated body having two ends and a curved sealing surface, the sealing surface having a pocket recessed therein for containing an insert seat;

a non-metallic insert seat disposed in the pocket and configured to sealingly engage a seat plate when the sealing member is in the first position; and

a retainer plate disposed on a surface of the insert seat and configured to retain the insert seat in the recessed pocket.

THE REJECTIONS

The Examiner's rejections of the claims to be reviewed on appeal include:

1. Claims 1, 3-7, and 10-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Desai (US 5,836,356; iss. Nov. 17, 1998) in view of Allenbaugh (US 3,284,046; iss. Nov. 8, 1966). Ans. 3.

2. Claims 1, 3-7, and 10-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Allenbaugh in view of Desai. Ans. 4.

3. Claims 1, 3-7, and 9-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bajka (US 4,635,674, iss. Jan. 13, 1987) in view of Desai in view of Allenbaugh. Ans. 5.

4. Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Allenbaugh in view of Desai in view of Scobie (US 4,496,135, iss. Jan. 29, 1985). Ans. 6.

5. Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Desai in view of Allenbaugh in view of Geiser (US 4,634,094, iss. Jan. 6, 1987). Ans. 6-7.

6. Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Bajka in view of Desai in view of Allenbaugh in view of Geiser. Ans. 7.

7. Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Allenbaugh in view of Desai as evidenced by Reaves (US 4,379,543, iss. Apr. 12, 1983). Ans. 7.

8. Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Desai in view of Allenbaugh as evidenced by Reaves. Ans. 8.

9. Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Bajka in view of Desai in view of Allenbaugh as evidenced by Reaves. Ans. 8.

ANALYSIS

Rejection 1

The Examiner and Appellants dispute whether the cited references disclose the claim limitation “a curved sealing surface, the sealing surface having a pocket recessed therein for containing an insert seat,” as required by each of claims 1, 3-7, and 10-13. *See* Ans. 8-10; App. Br. 14-17 and 19.

The Examiner finds that Desai discloses a sealing member with a body having a curved sealing surface, but that “Desai lacks the body having a pocket for containing [an] insert seat.” Ans. 3. The Examiner further finds that “Allenbaugh discloses a body having a pocket for containing [an] insert seat.” *Id.* In support of this finding, the Examiner states that Figures 1 and 2 of Allenbaugh show “a seat 44 which is ‘a pocket’ as it is ‘recessed therein’ with lip 46 defining the outer raised area and boss 45 defining the inner raised area.” *Id.* at 8-9. According to the Examiner, Allenbaugh also discloses a face ring 43 that corresponds to the claimed “insert seat,” and that the pocket between lip 46 and boss 45 receives the face ring 43 “recessed in” the pocket. *Id.* at 9. The Examiner concludes that “[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to use the sealing member of Allenbaugh to improve the sealing capabilities of [Desai’s sealing member].” *Id.* at 4.

In response, Appellants assert that the disputed limitation in each of independent claims 1, 11, and 13 requires “a recessed pocket disposed within the sealing surface for accepting an insert seat.” App. Br. 17. In view of this, Appellants argue that the Examiner erred in finding that Allenbaugh meets the disputed claim limitation because “the face ring of

Allenbaugh is coupled to the seat by a lip and a boss which protrude from the sealing surface.” *Id.*

Appellants have the better position. The Examiner explains that he finds the space between Allenbaugh’s boss 45 and lip 46 to constitute a pocket because it is recessed relative to boss 45 and lip 46. Ans. 8-9. However, even if we accept the Examiner’s finding that this space constitutes a pocket recessed between a protruding boss 45 and lip 46, the Examiner does not clearly explain how Allenbaugh discloses or suggests a pocket that is recessed specifically into a curved sealing surface, as opposed to a pocket that is recessed between projections extending outward of a curved surface. Further, it is unclear from the Examiner’s rejection why one skilled in the art would disrupt the continuous sealing surface in Desai to include a recessed pocket containing an insert seat when the eccentric plug member 80 (and curved sealing surface) is already formed of a rubberized material for sealing. *See* Desai, col. 8, ll. 48-53. Accordingly, we cannot sustain Rejection 1.

Rejection 2

Regarding the rejection of claims 1, 3-7, and 10-13 based on Allenbaugh in view of Desai, the Examiner and Appellants dispute the same claim limitations for the same reasons discussed *supra* in connection with the rejection of the same claims based on Desai in view of Allenbaugh. *See* Ans. 4 and 9-10; App. Br. 19. Accordingly, for the same reasons as discussed above in Rejection 1, we cannot sustain Rejection 2.

Rejection 3

Bajka discloses a diverter valve 21 with a housing 22 having a central axis 24 and a plurality of openings 23 spaced circumferentially around the

axis 24. Bajka, col. 3, ll. 31-34. The diverter valve 21 also includes a diverter member 26 that can rotate around the central axis 24. *Id.* at col. 3, ll. 34. The diverter member 26 has a seal assembly 31 that slidably seals against an arcuate inner surface 29 of the housing 22. *Id.* at col. 3, ll. 41-44. The diverter member 26 can selectively seal any one of the openings 23 when rotated to block the opening 23. *See Id.* at col. 3, ll. 45-54; col. 6, l. 63-col. 7, l. 3. Bajka discloses that its design “provides a high pressure seal against the flow of water around the diverter.” *Id.* at col. 3, ll. 50-52.

Apparently referring to Bajka’s diverter member 26, the Examiner asserts that “Bajka discloses an elongated body having a sealing member.” Ans. 5. The Examiner also finds that “Bajka is silent as to the body being eccentric.” *Id.* The Examiner further finds that “Desai discloses an eccentric body 80.” *Id.* The Examiner concludes that “[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to make the body of Bajka eccentric as disclosed by Desai in order to provide more force of sealing as the rotation would not be circular.” *Id.*

In response, Appellants assert that it would not have been obvious to modify Bajka by making its diverter member 26 eccentric. Appellants argue that “the sealing member of Bajka cannot be made eccentric because the diverter of Bajka must be capable of swinging from two different directions and sealing two different ports.” App. Br. 20. Appellants suggest that making the diverter member 26 eccentric would cause the compressive force between the seal 31 of the diverter member 26 and the arcuate inner surface 29 housing 22 to increase as the diverter member 26 rotates in one direction but decrease as the diverter member 26 rotates in the opposite direction. *See Id.* at 21. Due in part to this factor, Appellants argue, implementing the

Examiner's proposed modification of Bajka would eliminate the ability to alternately swing the diverter member 26 clockwise and seal opening 23b or swing it counterclockwise and seal opening 23c. *Id.* at 21-22.

The Examiner does not dispute Appellants' argument that the proposed modification would cause decreasing compressive force between the diverter member 26 and the housing 22 when the diverter member rotates in one direction. *See* Ans. 10. But the Examiner finds that the diverter valve 21 "would still work as the max compressive load would be on one seat and less than max compressive load would be on another, but both seats would have compressive loads thus it would work." *Id.*

Appellants respond that the Examiner does not cite any evidence that Bajka's valve 21 would still work if modified to have an eccentric configuration of the diverter member 26. Reply Br. 4. Appellants also argue that even if the valve 21 could work with an eccentric diverter member 26, the decreasing compressive force in one direction of rotation of diverter member 26 would make the compressive force less than optimum when the diverter member is blocking one of the seats. *See Id.* Accordingly, Appellants conclude that "even by the Examiner's own reasoning, it would not be obvious to modify the embodiment shown in Bajka as suggested by the Examiner because doing so would negatively impact the operation of the embodiment." *Id.* at 4-5.

Appellants have the better position. Appellants' arguments suggest that making the diverter member 26 eccentric would result in decreasing sealing integrity as the diverter member 26 rotates in one direction and the compressive force between the diverter member 26 and the arcuate inner surface 29 of the housing 22 decreases. *See* App. Br. 20-22; Reply Br. 4-5.

This would result in less sealing integrity when the diverter member 26 blocks one opening 23 than when the diverter member 26 blocks another opening 23. The Examiner does not dispute this. *See* Ans. 10. And without citing any evidence, the Examiner has not established that Bajka's valve 21 would still work. Moreover, even if the Examiner did establish that the modified valve 21 would still work, the Examiner does not provide a rational explanation or evidence that a person of ordinary skill in the art would have found it desirable or acceptable to design the valve 21 with one amount of compressive sealing force when the diverter member 26 is covering one opening 23 and a lesser amount of compressive sealing force when the diverter member 26 is covering another opening 23, particularly in view of Bajka's disclosure that its design "provides a high pressure seal against the flow of water around the diverter" without the Examiner's proposed modification. Bajka, col. 3, ll. 50-52. Accordingly, we cannot sustain Rejection 3.

Rejections 4-9

The Examiner's discussion of dependent claims 8 and 9 in Rejections 4-9 does not cure the above-discussed deficiencies of the Examiner's rejections of independent claim 1. Accordingly, we cannot sustain Rejections 4-9.

DECISION

We reverse the Examiner's decision regarding claims 1 and 3-13.

REVERSED

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