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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KENNETH RAY WARD and OTTO W. SWOGGER

Appeal 2010-005974
Application 10/768,263
Technology Center 3700

Before: STEVEN D.A. McCARTHY, PHILLIP J. KAUFFMAN, and
MICHAEL C. ASTORINO, *Administrative Patent Judges*.

KAUFFMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Appellants appeal under 35 U.S.C. § 134 from a rejection of claims 1-3, 5-9, 11-14, 16-20. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

The Invention

Appellants' claimed invention "relates to a nozzle for gas-heated appliances and more particularly, to a nozzle which may be used with appliances that burn natural gas or liquefied petroleum (LP) gas and which may be used in very high temperature burning environments as well as in lower conventional lower temperature environments." Spec. para. [0001]. Claims 1 and 17 are the independent claims on appeal. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. An adjustable gas nozzle comprising, in combination:
 - a nozzle body member having an elongated passageway therethrough with an inlet opening at a first end and an outlet at a second end;
 - a conduit connected to the nozzle body member;
 - an adjusting member disposed intermediate the conduit and the nozzle body member and having a first end with a first restricted orifice disposed proximate to the second end of the nozzle body member, and a second end having a second orifice, said first and second ends having a first passageway intermediate thereto providing fluid communication intermediate the first restricted orifice and the second orifice;
 - a coupling between said conduit and said nozzle body member to permit first and second alternative positions therebetween;
 - a by-pass passageway around the first passageway of the adjusting member and said first restricted orifice;
 - cooperative surfaces in said first position to seal between said body member and said adjusting member to close off flow through said by-pass passageway to permit a first gas flow through the first restricted orifice and second orifice in series

so that gas flow rate is regulated by said first restricted orifice;

cooperating means associated with said adjusting member and said conduit upstream of said cooperating surfaces for limiting the displacement of said nozzle body member relative to said conduit in said first position;

said nozzle body member being moveable into said second position relative to said conduit to relieve the seal between the said body member and said adjusting member to permit a second gas flow of an amount greater than said first gas flow through the combination of said first restricted orifice and said by-pass passageway wherein flow through the by-pass passageway does not flow through the first passageway and said cooperating surfaces are spaced apart in the second position;

a seal distinct of the coupling provided between said conduit and said nozzle body member and integral to the conduit precluding leakage of gas therebetween in both the first and second positions; and

wherein the first position is configured to provide sufficient gas flow for use with propane and the second position is configured to provide sufficient gas flow for natural gas usage for a selected downstream application in which significantly more natural gas would be required than propane for similar performance.

Evidence Relied Upon

Hinchman	US 2,517,877	Aug. 8, 1950
Kachergis	US 2,944,743	Jul. 12, 1960
Kuiken	US 3,116,880	Jan. 7, 1964
Ito	US 4,432,496	Feb. 21, 1984
Ridenour	US 5,025,990	Jun. 25, 1991
Blake	US 7,427,230 B2	Sep. 23, 2008

The Rejections

The following rejections are before us on appeal:

- I. Claims 1, 3, 5-7, 9, 11, 12, and 17 under 35 U.S.C. § 102(b) as anticipated by Hinchman.
- II. Claims 1, 3, 5-7, 9, 11, 12, and 17 under 35 U.S.C. § 103(a) as unpatentable over Ridenour and Ito.
- III. Claims 1, 3, 5-9, 11-14, and 16-20 under 35 U.S.C. § 103(a) as unpatentable over Ridenour and Kuiken.
- IV. Claims 1-3, 5-9, 11-14, and 16-20 under 35 U.S.C. § 103(a) as unpatentable over Ridenour and Kachergis.

OPINION

I. Anticipation by Hinchman

Independent claims 1 and 17 are each directed to an adjustable gas nozzle that is capable of a second position permitting gas flow through the first passageway and the by-pass passageway.

The Examiner found that Hinchman discloses an adjustable gas nozzle that includes a nozzle body (outer member 8) having an outlet at the second end (the opening created by sleeve bore 29 at the distal end of adjusting member 26), a first passageway (sleeve bore 29 and bore 33) and a by-pass passageway (bore 18). Ans. 3. The Examiner reasons that Hinchman's device is capable of a second position permitting gas flow through the first passageway (sleeve bore 29 and bore 33) and the by-pass passageway (bore 18). Ans. 3, 13. Specifically, the Examiner reasons that Hinchman is capable of a second position:

where lock nut **32** is unseated from seat **15** so the threads **12** and **30** are loose so fluid is permitted to pass therebetween and the adjusting member **25** is retracted from seat **19**. Fluid escaping between threads **12** and **30** is permitted into by-pass passageway **18** and through slits **27**.

Ans. 4; *see also* Ans. 13-14.

The Examiner's reasoning explains how gas may flow between the internal threads of body section 7 and the threaded shank 30 of adjusting member 26 into the proximal end of bore 18 of outer member 8, and how gas exits the nozzle body (outer member 8) at the slits 27 of sleeve 25 within the distal end of bore 18, so that it exits at the second end (the opening created by sleeve bore 29 at the distal end of adjusting member 26). Ans. 13-14; *see also* Hinchman, col. 2, ll. 1-5, 49-50; figs. 1, 4, 5. However, such reasoning ignores that in order for gas to reach the slits 27 of sleeve 25 at the distal end of bore 18, gas must sequentially flow past lock nut 32 of adjusting member 26, knurled head 31 of adjusting member 26, and the proximal end of sleeve 25. *See* Hinchman, fig. 1. Given that the Examiner's explanation does not address the full path of the flow of gas, the Examiner has not provided a persuasive reason for the finding that Hinchman's nozzle is capable of a second position permitting gas flow as claimed. *See In re Best*, 562 F.2d 1252, 1254-5 (CCPA 1977); *see also* App. Br. 8-11.

Consequently, we cannot sustain the rejection of independent claims 1 and 17 or their dependent claims 3, 5-7, 9, 11, and 12.

II. Obviousness over Ridenour and Ito

Claims 1, 3, 5-7, 9, 11, 12¹

The Examiner found that Ridenour discloses an adjustable gas nozzle as claimed, except a seal distinct of the coupling between the conduit and the nozzle body. Ans. 7. The Examiner found that Ito's outer annular bulge **28** inherently forms a seal against element 41 of outer cover 40, and found that outer annular bulge 28 and inner annular engaging bulge 45 prevent inadvertent removal of the nozzle body member. Ans. 7, 17 (citing Figure 2 of Ito). The Examiner concluded that it would have been obvious to modify Ridenour's adjustable gas nozzle by adding annular bulges 28 and 45, as taught by Ito, in order to prevent accidental removal of the nozzle body member. Ans. 7-8.

Appellants argue that the Examiner has not made a prima facie case of obviousness for two reasons. First, Appellants argue that there is no teaching or suggestion that Ito's annular bulge 28 forms a seal with the internal surface of the outer cover 40. App. Br. 18-19; Reply Br. 5. However, the Examiner did not find that Ito expressly discloses that annular bulge 28 forms a seal with the inner surface 41 of outer cover 40; rather, the Examiner found that annular bulge 28 inherently provides a seal. *See* Ans. 7, 17. Appellants' argument is unpersuasive because it does not address the rejection as articulated by the Examiner.

Second, Appellants argue that the proposed modification would change the operating principle of Ito so that the proposed combination is not proper. App. Br. 19 (citing *In re Ratti*, 270 F.2d 810 (CCPA 1959)). App.

¹ Appellants present a single argument for these claims, and we select independent claim 1 as representative.

Br. 19; Reply Br. 5. A change in the principle of operation of the primary reference can, in some circumstances, render a modification nonobvious. *See e.g., In re Ratti*, 270 F.2d 810, 811-13 (CCPA 1959). However, Appellants contention is unpersuasive because the Examiner does not propose to modify Ito's device. Instead, the Examiner proposes a modification to Ridenour's device based upon a disclosure in Ito. *See Ans. 7, 17.*

Consequently, we sustain the rejection of claims 1, 3, 5-7, 9, 11, and 12 as obviousness over Ridenour and Ito.

Claim 17

Appellants repeat the arguments used against claim 1 without making a distinction between claim 17 and claim 1 related to those arguments. App. Br. 19; Reply Br. 5. These arguments are unpersuasive as discussed with regard to independent claim 1 as subject to this ground of rejection, *supra*.

Appellants also argue that "there is no motivation to combine a bulge **28** used with inner annular engaging bulge **45** to prevent inadvertent cover **20** removal from a liquid foam dispensing device separately and apart from bulge **45** to perform a function not taught or suggested by the Ito reference for the purpose for which is cited by the Office Action." App. Br. 20. The Examiner points out that Ito provides such a suggestion as a basis for the rationale provided for the proposed combination. Ans. 17 (citing Ito, col. 4, l. 67). Appellants then concede that Ito provides such a suggestion, but contend that the motivation for providing a seal and preventing inadvertent removal of a cover are distinct and the Examiner has not pointed to any motivation for adding a seal. Reply Br. 5.

The premise of Appellants' argument is that the proposed modification must be to solve the same problem facing Appellants (providing a seal). Such is not the law. *See KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 420 (2007) (it is error to "hold[] that courts and patent examiners should look only to the problem the patentee was trying to solve.")

Appellants also argue that the concerns relating to sealing water leaks in a foam mixing device such as Ito's and concerns related to gas leaks in an adjustable nozzle as claimed "take on different magnitudes of concern." App. Br. 21. Assuming for sake of argument that the magnitude of concern for a water seal differs from that of a gas seal, we fail to discern, and Appellants fail to cogently explain, how such concerns illustrate that Ito's outer annular bulge 28 does not correspond to a seal as claimed. Nor does this assertion otherwise explain how those concerns render the claimed subject matter nonobvious.

As such, we sustain the rejection of claim 17 as unpatentable over Ridenour and Ito.

III. Obviousness over Ridenour and Kuiken

Claims 1, 3, 5-9, 11-14, and 16²

In contrast to the second rejection, here the Examiner relies upon Kuiken rather than Ito for disclosure of a distinct seal. *See* Ans. 9-10, 17-18.

Appellants argue that Kuiken's O-ring seals 84 are not integral to the conduit as claimed. App. Br. 21-22; *see also* Ans. 9. The Examiner

² Appellants present a single argument for these claims, and we select claim 1 as representative. *See* App. Br. 21-22; Reply Br. 5.

interprets “integral,” as claimed, to mean formed as a unit with another part, or composed of integral parts. Ans. 17-18. Appellants respond that such interpretation is not what Appellants intended, and that in light of the Specification and prosecution history, “‘integral’ means ‘integral.’”³ Reply Br. 5.

Independent claim 1 calls for a seal distinct of the coupling provided between the conduit and the nozzle body and “integral” to the conduit. Claim 1 does not explicitly state, nor does the context of the claim imply, that the seal and conduit are of one-piece construction. Nor does the Specification provide a lexicographical definition of integral. *Spec. passim*. A common meaning of integral put forth by the Examiner is “formed as a unit with another part.” Ans. 18. We discern nothing in Appellants’ Specification inconsistent with this ordinary meaning. Therefore, a seal integral to the conduit as called for in claim 1 is a seal that is formed as a unit with the conduit though not necessarily being of one-piece construction.⁴

Consequently, Appellants argument is unpersuasive because it is not commensurate in scope with claim 1, and we sustain the rejection of claims 1, 3, 5-9, 11-14, and 16.

³ Though not explicit, Appellants’ argument suggests that integral as claimed means of one-piece construction.

⁴ Our reviewing court has on several prior occasions interpreted the term “integral” to cover more than a unitary construction. *See, e.g., In re Dike*, 394 F.2d 584, 589, (CCPA 1968) and *Advanced Cardiovascular Sys. v. Scimed Life Sys.*, 887 F.2d 1070, 1074 (Fed.Cir.1989) (nothing of record limited “integral” to mean “of one-piece” construction).

Claims 17-20⁵

Appellants repeat the arguments used against claim 1 without making a distinction between claim 17 and claim 1 related to those arguments. App. Br. 22; *see also* Reply Br. 5. These arguments are unpersuasive as discussed with regard to independent claim 1, as obvious over Ridenour and Kuiken, *supra*.

Appellants also argue that Kuiken, which is directed to the flow of water, involves different magnitudes of concern to those involving the flow of gas such as the claimed subject matter. App. Br. 22. This line of argument parallels that used in support of claim 17 as obvious over Ridenour and Ito, *supra*, and is similarly unconvincing.

Consequently, we sustain the rejection of claims 17-20 as unpatentable over Ridenour and Kuiken.

IV. Obviousness over Ridenour and Kachergis

Claims 1-3, 5-9, 11-14, and 16

Appellants argue that although Kachergis's ribs 35 do not provide any seal with the nozzle body as claimed because the seal is provided by an O-ring (flip ring 37). App. Br. 22-23; Reply Br. 18-19. However, the Examiner did not find that Kachergis's ribs 35 correspond to a seal as claimed; rather, the Examiner found that circumferentially spaced ribs 35, annular groove 36, and flip ring 37 together correspond to a seal as claimed. Ans. 11, 18-19. Thus, Appellants' argument is unconvincing because it does not address the rejection as articulated by the Examiner.

⁵ Appellants present a single argument for these claims and we select claim 17 as representative.

Consequently, we sustain the rejection of claims 1-3, 5-9, 11-14, and 16.

Claims 17-20

Appellants repeat the argument that flip ring 37 provides the seal rather than ribs 35. This argument is unconvincing for the reasons given with regard to claim 1 as subject to this ground of rejection, *supra*. See App. Br. 23; Reply Br. 6.

In parallel with the prior two rejections, Appellants also argue that Kachergis is concerned with the flow of water, while the claimed subject matter is concerned with the flow of gas which can cause problems of a more immediate concern. App. Br. 23-24; Reply Br. 6. We agree with the Examiner that this argument is not commensurate in scope with claim 17. See Ans. 19. Further, as noted with regard to Appellants' similar arguments against the second and third rejections, *supra*, we fail to discern, and Appellants fail to cogently explain, how these differences in concerns demonstrate error in the Examiner's rejection.

Consequently, we sustain the rejection of claims 17-20.

DECISION

We reverse the Examiner's decision to reject claims 1, 3, 5-7, 9, 11, 12, and 17 under 35 U.S.C. § 102(b) as anticipated by Hinchman.

We affirm the Examiner's decision to reject claims 1, 3, 5-7, 9, 11, 12, and 17 under 35 U.S.C. § 103(a) as unpatentable over Ridenour and Ito.

We affirm the Examiner's decision to reject claims 1, 3, 5-9, 11-14, and 16-20 under 35 U.S.C. § 103(a) as unpatentable over Ridenour and Kuiken.

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We affirm the Examiner's decision to reject claims 1-3, 5-9, 11-14, and 16-20 under 35 U.S.C. § 103(a) as unpatentable over Ridenour and Kachergis.

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

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