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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TIMOTHY D. STRECKER

Appeal 2010-004989
Application 11/244,915
Technology Center 3700

Before GAY ANN SPAHN, MICHAEL C. ASTORINO, and WILLIAM A. CAPP, *Administrative Patent Judges*.

ASTORINO, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellant appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 16, 34-38, 40, and 42-53. Claims 1-15 and 18-33 have been cancelled and claim 39 has been withdrawn from consideration. Claims 17 and 41 are objected to as being dependent upon a rejected base claim. We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We REVERSE.

Claimed Subject Matter

Claims 34, 35, 36, and 37 are the independent claims on appeal. Claim 34, reproduced below, is illustrative of the subject matter on appeal.

> 34. A method of dispensing a viscoelastic liquid from a dispensing apparatus, comprising the steps of:
>
> introducing a first component viscoelastic liquid to a first feed screw disposed within a chamber;
>
> introducing a second component viscoelastic liquid to a second feed screw disposed within the chamber; and
>
> rotating the first and second feed screws a pre-selected amount, to mix the first and second component viscoelastic liquids forming a viscoelastic liquid product and to dispense a measured amount of the viscoelastic liquid product directly from the dispensing apparatus.

Rejections

The following Examiner's rejections are before us for review.

Claims 16, 36, 38, 40, 42, 45, and 46 are rejected under 35 U.S.C. § 102(e) as anticipated by Suto (US 6,211,267 B1, iss. Apr. 3, 2001).

Claims 34, 35, and 47-53 are rejected under 35 U.S.C. § 103(a) as unpatentable over Laghi (US 5,328,459, iss. Jul. 12, 1994) and Suto.

Claims 37, 43, and 44 are rejected under 35 U.S.C. § 103(a) as unpatentable over Suto.

OPINION

The rejections of claims 16, 36, 38, 40, 42, 45, and 46 as anticipated by Suto and claims 43 and 44 as unpatentable over Suto

Independent claim 36 recites a "dispensing apparatus" including "a dispenser tip mounted to the bottom portion of a chamber." Br., Claims Appendix. The Examiner finds that Suto's discharge port 10 and barrel 12 corresponds to the claimed dispenser tip and chamber, respectively. Ans. 3, 4, 9. The Appellant contends that Suto does not disclose a dispensing tip mounted to the bottom of a chamber because the discharge port 10 is integrally formed as part of the barrel 12 and therefore, cannot satisfy the "mounted to" claim language. Br. 9-10. The Appellant supports this contention by pointing to Suto's Figures 1 and 3 which depict the discharge port 10 and barrel 12 having the same cross-hatching. *Id*. In response to the Appellant's contention, the Examiner provides a dictionary definition of the term "mounted" which "mean[s] 'to fix' or 'to place' or 'to fix securely to a support'"[1] and explains that "[s]ince the dispenser tip of Suto . . . is fixed to the bottom portion of the chamber, then the claimed limitation is fairly met." Ans. 9.

The Appellant's contention is persuasive. With respect to the Examiner's quoted definitions *supra*, we note that the website

[1] The American Heritage® Dictionary of the English Language, Fourth Edition, copyright © 2000, Houghton Mifflin Company, accessed at www.thefreedictionary.com.

TheFreeDictionary.com defines the term "mount" as "6. a. To fix securely to a support: *mount an engine in a car*. b. To place or fix on or in the appropriate support or setting for display or study: *mount stamps in an album; mount cells on a slide*" (last visited Jan. 19, 2013). These definitions suggest that the term "mounted" requires separate structures rather than an integrally formed structure. In other words, each of the examples of usage of the word "mount" from TheFreeDictionary.com requires that a first structure is mounted to a second structure, where the first structure is separate from the second structure. Indeed, the example in definition 6. a. requires a first structure "an engine" and a second structure "a car," and the examples in definition 6. b. requires a first structure "stamps" and a second structure "an album" and a first structure "cells" and a second structure "a slide." In each of these examples, the first structure is separate from the second structure. This is consistent with the Appellant's Specification. For example, chamber 820 includes portion 824, i.e., a first structure, that can be mounted to a removable dispenser tip 839, i.e., a second structure, by use of threaded portions 885 and 949. *See* Spec. 13, ll. 17-26, figs. 10, 11.

Since Suto's discharge port 10 and barrel 12 are not disclosed as separate structures, the Examiner's finding that the discharge port 10 is mounted to the bottom portion of the barrel 12 is not supported by a preponderance of the evidence. Thus, the Examiner's rejection of independent claim 36, and claims 16, 38, 40, 42, 45, and 46 which depend therefrom, cannot be sustained.

Additionally, the Examiner's rejection of claims 43 and 44 as unpatentable over Suto relies on the same unsupported finding concerning the discharge port 10 being mounted to the bottom portion of the barrel 12.

In other words, the Examiner's added reasoning for the rejection of claims 43 and 44 does not modify Suto's arrangement the discharge port 10 and barrel 12 (*see* Ans. 6-7) and as such, does not remedy the deficiency of the Examiner's unsupported finding. Consequently, the Examiner's rejection of claims 43 and 44 is likewise not sustained.

The rejection of claims 34, 35, and 47-53 as unpatentable over Laghi and Suto

Independent claim 34 is directed to "[a] method of dispensing a viscoelastic liquid from a dispensing apparatus" and includes, *inter alia*, the step of "*rotating* the first and second feed screws a *pre-selected amount*, to mix the first and second component viscoelastic liquids forming a viscoelastic liquid product and *to dispense a measured amount* of the viscoelastic liquid product directly from the dispensing apparatus" (hereinafter "rotating step"). Br., Claims Appendix (italics added).

The Examiner finds that Laghi discloses a method of dispensing a viscoelastic liquid from a dispensing apparatus by introducing first and second component liquids from cylinders 22 into chamber (mixing manifold) 32 "to mix the first and second component viscoelastic liquids forming a viscoelastic liquid product and *to dispense a measured amount* of the viscoelastic liquid product directly from the dispensing apparatus." *See* Ans. 4-5 (italics added) and Laghi, col. 4, ll. 1-32; *see also* Laghi, fig. 2. The Examiner also finds that "Laghi lacks . . . [a] mixing mechanism having a first and a second feed screw[]." Ans. 5. In fact, Laghi discloses that a static or dynamic mixer 34 is in fluid communication with mixing manifold 32. Laghi, col. 4, ll. 3-5. To remedy this deficiency with respect to claim 34, the Examiner turns to Suto's disclosure of an extruder including a motor

13 that rotates paddles 15, and the Examiner finds that Suto's paddles 15 correspond to the claimed feed screws. *See* Ans. 5; Suto, col. 2, ll. 27-37. *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 *substitute* Laghi's mixing mechanism with the mixing mechanism of Suto . . . in order to provide a uniform composition that can be readily generated by virtue of the fact the combination of paddles (15) compresses and stretches the material along the direction of the axles (11) as taught by Suto . . . in (col. 4, ll. 24-31).

Ans. 6 (italics added). It is notable that the Examiner substitutes Suto's mixing mechanism for Laghi's static or dynamic mixer 34.

The Appellant asserts that Suto discloses "*continuously* rotating the feed screws to *continuously* produce an organopolysiloxane gum solution by using a ball valve to control both the internal pressure and the rate of material discharged from the extruder at a constant rate" and contends that Suto does not rotate the first and second feed screws a *pre-selected amount* to *dispense a measured amount* of the viscoelastic liquid product directly from the dispensing apparatus. *See* Br. 24-25; *see also* Br. 20-21 and Suto, *passim*. More specifically, Suto discloses that its "[m]otor **13** drives the twin axles **11**, and a ball valve **14** is used to control the amount of the final product which is discharged from extruder A through the port **10**" (Suto, col. 2, ll. 34-36) and "in order to carry out the mixing of a solvent with an organopolysiloxane gum in a twin screw compounding extruder" ball valve 14 is required (Br. 25). *See* Suto, Abstract. Accordingly, the substitution of Suto's mixing mechanism for Laghi's mixer 34 would necessarily effect how the viscoelastic liquid product of Laghi would be dispensed. Therefore, the Examiner's reliance solely on Laghi "*to dispense a measured amount* of

the viscoelastic liquid product" (Ans. 5 (italics added)) is inadequate as the Examiner's reasoning must also include the effect of Suto's substituted mixing mechanism on Laghi's dispensing step.

The Examiner includes the following response to the Appellant's arguments:

> [a]s disclosed in Figure 4 of Suto. . . first and second feed screws (15) with a predetermined thread depth, being [sic] rotated to mix a predetermined amount of the product from container[s] 1-3 within chamber (12) (note: the depth of the thread is predesigned to hold/mix a certain amount of fluid as needed). Since, the predetermined thread depth of Suto . . . is being used to mix and dispense[] the product within the chamber, then, the claimed limitation "rotating the first and second feed screw a preselected amount" is fairly met.

Ans. 12. However, this response does not adequately address the Appellant's contention that the Examiner's proffered substitution would not have resulted in the "rotating step" of independent claim 34. *See* Br. 19-25.

Thus, for the foregoing reasons, the Examiner's rejection of independent claim 34, and claims 47-53 which depend either directly or indirectly therefrom, as unpatentable over Laghi and Suto is not sustained. More specifically, in regards to the Examiner's rejection of dependent claim 50[2], which relies on the discovery of optimum or workable ranges as involving only routine skill in the art and concludes that such an optimization would have been an obvious modification to one of ordinary skill in the art (Ans. 6), the rejection fails to explain how the optimization of the discharge rate of less than or equal to 0.8 milliliters per minute is routine

[2] Claim 50 is directed to "[t]he method of claim 48," and recites "wherein the measured amount of the viscoelastic liquid product dispensed further comprises dispensing the viscoelastic liquid product at a rate less than or equal to 0.8 milliliters per minute." Br., Claims Appendix.

skill in the art for the reasons to be discussed *infra* with respect to the rejection of claim 37.

Independent claim 35 is directed to "[a] method of dispensing a viscoelastic liquid from a dispensing apparatus," and similar to the "rotating step" of claim 34, recites the step of "*co-rotating or counter-rotating the first and second feed screws a pre-selected amount*, to mix the first and second component viscoelastic liquids to form a viscoelastic liquid product and to directly dispense a pre-selected volume of the viscoelastic liquid product from a dispensing tip." Br., Claims Appendix (italics added). For the reasons discussed *supra* with regard to the rejection of independent claim 34, the Examiner's rejection of independent claim 35 as unpatentable over Laghi and Suto is not sustained.

The rejection of claim 37 as unpatentable over Suto

Independent claim 37 recites a "dispensing apparatus" including "at least two feed screws . . . disposed in a chamber . . . wherein a pre-selected amount of rotation of the at least two feed screws mixes the first and second component viscoelastic liquids to form a viscoelastic liquid product and the pre-selected amount of rotation discharges, at a rate less than or equal to 0.8 milliliters per minute." Br., Claims Appendix.

The Examiner finds Suto discloses everything recited in claim 37 "except that the pre-selected amount of rotation of the at least two feed screws discharges at a rate less than or equal to 0.9 [sic] milliliters per min." Ans. 6. 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 modify the at least two feed screws of Suto . . . to discharge the product at a rate less than or equal to 0.8 milliliters per minute . . . since it

> has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. As per MPEP [§] 2144.05.

Ans. 7. *See In re Aller*, 220 F.2d 454, 456 (CCPA 1955) ("[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.")

The Appellant contends that the Examiner's conclusion of obviousness lacks support because "MPEP §[]2144.05(II) covers optimization of ranges which requires a result effective variable which Appellant asserts Examiner has not shown." Br. 33-34. Indeed, the Examiner does not determine that Suto includes a result-effective variable. *See In re Antonie*, 559 F.2d 618, 620 (CCPA 1977) (finding an exception to the rule of *Aller* that the discovery of an optimum value of a variable in a known process is normally obvious, in the case where a parameter optimized was not recognized to be a result-effective variable).

However, even if the Examiner determined that Suto includes a result-effective variable, *Aller* established two conditions for a conclusion of obviousness: one, the general conditions of the claim must be disclosed in the prior art; and two, discovery of the optimum or workable range must be a matter of routine experimentation for a person of ordinary skill in the art. *Aller* at 456. In this case, Suto discloses in Examples 1, 2, and 3, discharge rates of 100, 120, and 50 Kg/hour, respectively. *See* Br. 32-33, Suto, col. 5, l. 57-59, col. 6, ll. 15-17, 41-42. As such, the Examiner's reasoning is required, but fails, to address the second condition of *Aller* by explaining how the optimization of Suto's discharge rate from 100, 120, or 50 KG/hour to less than or equal to 0.8 milliliters per minute would be accomplished by

routine skill in the art. *See also* Br. 33. Thus, the Examiner's rejection of claim 37 is not sustained.

DECISION

We REVERSE the rejections of claims 16, 34-38, 40, and 42-53.

REVERSED

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