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EXAMINER

ZHOU, QINGZHANG

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ARNO HOHMANN, MARC PEUKER,
SEBASTIAN GUGGENMOS, MICHAEL KNEE, and
BRUCE R. BROYLES

Appeal 2015-001134
Application 12/089,920
Technology Center 3700

Before CHARLES N. GREENHUT, MICHAEL L. HOELTER, and
ANNETTE R. REIMERS, *Administrative Patent Judges*.

HOELTER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is a decision on appeal, under 35 U.S.C. § 134(a), from a final rejection of claims 8, 14, 16, 19–22, and 48–52. App. Br. 3. Claims 1–7, 9–13, 15, 17, 18, 24–27, 29, 31–35, 37, 38, 40–42, 45, and 47 are canceled. App. Br. 3. Claims 23, 28, 30, 36, 39, 43, 44, and 46 are withdrawn. App. Br. 3. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM and denominate the affirmance as a NEW GROUND OF REJECTION pursuant to our authority under 37 C.F.R. § 41.50(b).

THE CLAIMED SUBJECT MATTER

The disclosed subject matter “is directed to a plunger, a plunger assembly, and a system for storing a substance or substances, preferably flowable substances, and a method of filling and sealing a substance in a delivery system.” Spec. 1.¹ Claims 8, 9, and 50 are independent.

Independent claim 8 is illustrative of the claims on appeal and is reproduced below:

8. A system comprising:
 - a plunger for a cartridge, the plunger having a first end and an opposite second end, wherein the outer diameter of the plunger increases towards the edge of the plunger at the first end such that the outer diameter is configured to form a first seal with an inner wall of the cartridge, and the plunger comprising a passageway extending between the first and second ends, wherein the passageway comprises a sealing lip projecting into the passageway; and
 - a plug configured for insertion into the passageway to close the passageway at the sealing lip by combining with the sealing lip to form a second seal at the sealing lip.

REFERENCES RELIED ON BY THE EXAMINER

Ennis, III (“Ennis”)	US 4,693,706	Sept. 15, 1987
Fukui et al. (“Fukui”)	US 6,544,233 B1	Apr. 8, 2003

THE REJECTIONS ON APPEAL

Claims 8, 14, 16, 19–22, and 48–50 are rejected under 35 U.S.C. § 102(b) as anticipated by Ennis.

¹ Appellants’ Specification does not provide line or paragraph numbering, and accordingly, reference will only be made to the page number.

Claims 51 and 52 are rejected under 35 U.S.C. § 103(a) as obvious over Ennis and Fukui.

ANALYSIS

The rejection of claims 8, 14, 16, 19–22, and 48–50 as anticipated by Ennis

Appellants present similar arguments for independent claims 8, 19, and 50 and further, Appellants do not present separate arguments for dependent claims 14, 16, 20–22, 48, and 49. App. Br. 14–20. We select independent claim 8 for review with claims 14, 16, 19–22, and 48–50 standing or falling with claim 8. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Appellants initially address the limitation directed to an outer diameter of a plunger that is “configured to form a first seal with an inner wall of the cartridge.” App. Br. 15. On this point, the Examiner identifies Ennis’ plunger 36 having end 39 wherein this end has a greater diameter “such that the outer diameter (Fig. 1, 39) is configured to form a first seal (Fig. 1) with an inner wall of the cartridge (12).” Final Act. 2. Appellants dispute this arguing that end 39 of Ennis’ device does not have “a diameter that is different (*e.g.*, larger) than the outer diameter of” plunger 36, and hence no seal between the plunger’s end 39 and Ennis’ corresponding cartridge 12. App. Br. 15. The Examiner disagrees referencing Figures 1 and 7 of Ennis (and providing an enlarged annotated version of each) which shows that “end wall 39 has a protruded portion (See figure below) that has a larger diameter than” plunger 36 and hence “must act[] as a seal.” Ans. 5–6. Appellants address different figures (*i.e.*, Figures 5 and 6) contending that these views do not portray this end 39 as being larger because, (particularly with respect to Figure 5) if end 39 were larger, then this larger end would block the view of detent 40 and yet detent 40 is illustrated in this figure.

App. Br. 15. While there does appear to be a conflict between Ennis' drawings, Ennis specifically teaches that material 34 placed within cartridge 12 is retained by end wall 39 and that "the end wall 39 extends below the head or detent 40 to prevent leakage of the material" out of cartridge 12. Ennis 3:59–64. Accordingly, despite the (possibly inaccurate) depiction of end 39 in Figures 5 and 6, Ennis expressly states that end wall 39 prevents leakage of material and as such, we are not persuaded that the Examiner's reliance on end 39 as forming a first seal with the cartridge is in error.

Claim 8 also includes the limitation of a plug inserted into a passageway and configured "to close the passageway at the sealing lip." The Examiner finds that Ennis discloses all of the limitations of claim 8 including

wherein the passageway (45) comprises a sealing lip (70) projecting into the passageway (45); and a plug (50) configured for insertion into the passageway (45) to close the passageway at the sealing lip (70) by combining with the sealing lip (70) to form a second seal (Fig. 1) at the sealing lip (70).

Final Act 2.

Appellants contend that

the detent 70 of Ennis is not suitable to form a seal with the plunger 50. Ennis teaches in column 3, lines 54-59 that it "should be noted, when a desired amount of liquid 47 is inserted in the barrel 36, the volume must be such that when the plunger 50 is inserted into the barrel 36, the sealing head 56, of the plunger 50, is below the bead or detent 70 to prevent any leakage of liquid through the grooves 69" (emphasis added). From this teaching it is clear that any liquid at and above the detent 70 cannot be sealed by the detent 70 in combination with the plunger 50. In contrast the first position where the plunger can seal the barrel is below the detent 70. In addition, column 4, lines 6-8 of Ennis teaches that the "air above the liquid 47 is vented out of the barrel 36 via the grooves 69 until the wall 60 of the plunger

50 is below the bead 70.” This confirms that the detent 70 of Ennis is not suitable to form a seal with the plunger 50.

App. Br. 16; *see also* App. Br. 18, 20; and Reply Br. 6–7, 9–10, 11–12, and 13.

In essence, Appellants’ position is that the plunger 50 seals with the barrel 36 “below” rather than “at” the smaller diameter detent 70 and, thus, the structure disclosed by Ennis fails to anticipate claim 8. We disagree.

The claim term “at” is not defined in Appellants’ Specification but we are informed that it is “used as a function word to indicate presence or occurrence in, on, or near.” *See* <http://www.merriam-webster.com/dictionary/at>. This understanding as to seal location is consistent with Appellants’ Specification which states, “[t]he diameter of the constriction [or sealing lip] is preferably smaller than the diameter of the plug, at least in the area where the constriction [or sealing lip] seals with the plug.” *Spec. 2* (emphasis added). This passage from Appellants’ Specification is consistent with the above dictionary definition and makes clear that the constriction seals with the plug “in the area” of (i.e., “near”) the constriction. *See supra*.

However, to the extent the seal may be construed to lie precisely at the constriction or sealing lip, Ennis discloses such an arrangement occurring temporarily during operation of the Ennis device. More specifically, Ennis discloses “[i]nside the inner barrel **36** is a circumferential bead or detent **70** which is 0.010" smaller than [*sic*] the inside diameter of the inner barrel.” Ennis 3:26–29. Ennis further discloses

The head **56** of the plunger **50** may have a diameter at the walls **60** and **66** which is slightly larger than the inside diameter of the wall **38** (0.0006" to 0.010") to insure that the head is gripped in

a slidable, liquid-tight seal, while the wall 38 flexes circumferentially.

Ennis 4:13–18 (emphasis added).

From the foregoing it is clear that the bead or detent 70 is smaller than the inside diameter of barrel 36, and that walls 60, 66 of plunger head 56 are larger than the inside diameter of wall 38 of barrel 36 (as well as detent 70). Consequently, walls 60, 66 of the plunger head will inevitably contact, even if only temporarily, the inner surface of the bead or detent 70 as the plunger travels through barrel 36. Furthermore, since wall 38 of barrel 36 flexes circumferentially as the plunger head passes there through, the larger diameter walls 60, 66 of the plunger head will contact and force bead or detent 70 to radially expand as walls 60, 66 pass thereby. Upon this occurrence, walls 60, 66 would engage and close the passageway at the constriction formed by the bead or detent 70 due to flexible wall 38 resisting circumferential expansion from its unexpanded state. That is, during plunger passage, flexible wall 38 of barrel 36 would apply a circumferentially inwardly force against the larger diameter walls 60, 66 of the plunger head to form a *temporary seal* therewith as plunger 56 passes by or through barrel 36. *See App. Br. 18, 20.*

A reference can be regarded as prior art that describes a composition or structure as being an intermediate product. *In re Mullin*, 481 F.2d 1333, 1335, (CCPA 1973) (citing *In re Herbert*, 461 F.2d 1390, 1394 (CCPA 1972)). The temporary seal formed between plunger walls 60, 66 and bead or detent 70 is an intermediate configuration that also satisfies the limitation of a “plug configured for insertion into the passageway to close the passageway at the sealing lip by combining with the sealing lip to form a second seal at the sealing lip,” as recited in claim 8.

In summary, we affirm the Examiner's rejection of anticipation based on the analyses above and denominate the affirmance as a new ground of rejection pursuant to our authority under 37 C.F.R. § 41.50(b) because it relies on reasons different from and/or additional to those stated by the Examiner, and also to provide Appellants a fair opportunity to respond.

The rejection of claims 51 and 52 as obvious over Ennis and Fukui

Appellants do not argue the rejection of claims 51 and 52, which depend from claim 50. App. Br. 19–20. To be clear, the Examiner relies on Fukui for disclosing the limitations of these claims. Final Act. 4–5. Thus, for the reasons set forth above, we sustain the Examiner's rejection of these claims. We also denominate the affirmance of the rejection of these claims as a new ground of rejection.

DECISION

We enter a NEW GROUND of rejection regarding claims 8, 14, 16, 19–22, and 48–52 under 35 U.S.C. § 102(b). This New Ground of Rejection is entered because it relies on reasons different from and/or additional to those stated by the Examiner and also to provide Appellants a fair opportunity to respond.

Further, 37 C.F.R. § 41.50(b) provides that, “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.” 37 C.F.R. § 41.50(b) also provides that Appellants must, WITHIN TWO MONTHS, exercise one of the following options:

- (1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims

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so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the [E]xaminer. . . .

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same record

Further guidance on responding to a new ground of rejection can be found in the Manual of Patent Examining Procedure § 1214.01.

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

AFFIRMED; 37 C.F.R. § 41.50(b)