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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* HOWARD GOLD

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Appeal 2017-001800
Application 13/067,632[1]
Technology Center 3700

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Before LINDA E. HORNER, THOMAS F. SMEGAL, and BRENT M. DOUGAL, *Administrative Patent Judges*.

HORNER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant seeks our review under 35 U.S.C. § 134(a) of the Examiner's decision rejecting claims 1–3, 6–14, 16, and 17. Final Office Action (January 8, 2016) (hereinafter "Final Act."). We have jurisdiction under 35 U.S.C. § 6(b).

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[1] Appellant identifies Becton, Dickinson and Company as the real party in interest. Appeal Brief 1 (June 23, 2016) (hereinafter "Appeal Br.").

Appellant contests the Examiner's finding of anticipation and determination of obviousness of the claimed syringe. Specifically, Appellant asserts that the prior art does not disclose or render obvious the claimed collar. For reasons discussed in detail in this opinion, we find sufficient evidence to sustain all of the rejections. Accordingly, we AFFIRM.

## CLAIMED SUBJECT MATTER

Appellant's claimed subject matter relates to "an adjustable plunger dose stop for a syringe." Specification ¶ 2 (filed June 15, 2011) (hereinafter "Spec."). Claims 1 and 12 are the independent claims. Claim 1 is illustrative of the claimed subject matter and is reproduced below.

> 1. A syringe, comprising:
>
> a body for receiving a medicament;
>
> a collar rotatably disposed in said body, said collar being rotatable to set a desired dose of the medicament by axially moving said collar with respect to said body by rotational movement of said collar with respect to said body; and
>
> a plunger movably disposed in said collar, said plunger being axially movable with respect to said collar to selectively draw in the medicament according to said set desired dose, and to dispense the medicament.

Appeal Br. 14 (Claims Appendix).

## EVIDENCE

The Examiner's decision relies upon the following evidence:

| | | |
|---|---|---|
| Moorhouse | US 3,343,539 | Sept. 26, 1967 |
| Brown | US 3,672,369 | June 27, 1972 |
| Porat | US 4,583,978 | Apr. 22, 1986 |

| | | |
|---|---|---|
| Botich | US 5,788,677 | Aug. 4, 1998 |
| Veasey | US 2007/0093761 A1 | Apr. 26, 2007 |
| Ogier ("Ogier '231") | FR 2 575 231 A1 | June 27, 1986 |
| Ogier | FR 2 583 463 A2 | Dec. 19, 1986 |

REJECTIONS

The Final Office Action includes the following rejections:

1. Claims 1–3, 6, 7, 12, 13, 16, and 17 stand rejected under pre-AIA 35 U.S.C. § 102(b) as anticipated by Moorhouse.
2. Claims 1, 6, 7, 12–14, 16, and 17 stand rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over Ogier, Botich, and Porat.
3. Claims 2 and 3 stand rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over Ogier, Botich, Porat, and Brown.
4. Claims 8, 10, and 11 stand rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over Ogier, Botich, Porat, and Ogier '231.
5. Claim 9 stands rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over Ogier, Botich, Porat, Ogier '231, and Veasey.

ISSUES

For each of the first and second grounds of rejection, Appellant argues the claims subject to each ground of rejection as a group. Appeal Br. 7–10. Pursuant to 37 C.F.R. § 41.37(c)(1)(iv), we select claim 1 as representative of each group. Appellant does not present any additional arguments as to the third through fifth grounds of rejection. Appeal Br. 11–12.

This appeal presents two issues. As to the first ground of rejection, the issue is whether the Examiner erred in finding that Moorhouse's collar is "rotatable to set a desired dose of the medicament by axially moving said

collar with respect to said body," as recited in claim 1. As to the second ground of rejection, the issue is whether the Examiner erred in determining that the combined teachings of Ogier, Botich, and Porat render obvious a collar rotatably disposed in a body, the collar being "rotatable to set a desired dose of the medicament by axially moving said collar with respect to said body by rotational movement of said collar with respect to said body," as recited in claim 1.

## ANALYSIS

*First Ground of Rejection: Anticipation by Moorhouse*

Appellant argues that the Examiner erred in finding anticipation of claim 1 because adjustment of Moorhouse's member 42 does not set a desired dose; adjustment of member 42 is designed only to limit or lengthen the "filling stroke." Appeal Br. 8 (Appellant arguing, "according to Moorhouse, the actual dose is determined by the operator sensing 'the end of the filling stroke with the compression of the spring 58 to the point where the spring 57 is moved to engage the shoulder 18'"). Appellant explains that adjustment of member 42 does not prevent the operator from continuing to push the handle 40 downwardly after the operator senses the end of the filling stroke. Reply Br. 2. Close examination of the claim language reveals that this argument is a distinction without a difference because the argument is not commensurate with the scope of the claim.

Claim 1 recites that the collar is "rotatable to set a desired dose of the medicament" and that the plunger is "axially movable with respect to said collar to selectively draw in the medicament according to said set desired dose." Appeal Br. 14 (Claims Appendix). We interpret this claim language

in light of Appellant's Specification. Appellant's Specification describes a problem in the syringe art is that an operator must visually measure the liquid medication level using scale markings while the dose is being drawn. Spec. ¶ 3. The Specification identifies a need in the art for a syringe in which the user does not have to continuously visually monitor the scale markings while drawing a dose. *Id.* The Specification further identifies a need in the art for a syringe in which an accurate dose is easily drawn into the syringe. *Id.* at ¶ 5.

The Specification addresses this need with a syringe having an adjustable plunger dose stop that allows an operator to select the desired dose prior to drawing medication and provides a mechanical stop that limits the amount of medication drawn into the syringe by the plunger. *Id.* at ¶ 9. The Specification discloses that an operator using this syringe "is not required to visually measure the liquid medication using scale markings." *Id.* The Specification describes embodiments of the invention in which an operator "dials the desired dose" and then draws the medicament by pulling a plunger out of the syringe body until the plunger abuts a mechanical stop, limiting the amount of medication drawn to the set dose. *See, e.g.*, *id.* at ¶ 43 (describing embodiment of Figures 1–5); *see also id.* at ¶ 50 (describing embodiment of Figure 6, in which the plunger has an integral stop feature).

Although the Specification discloses limiting movement of the plunger using a mechanical stop so that only the desired dose can be drawn into the syringe, the language of claim 1 is not limited to this embodiment. Certainly, using a mechanical stop to physically prevent more than the desired dose to be drawn into the syringe is one way to avoid the operator

having to visually monitor the amount of medicament during the drawing operation. The claim language, however, recites only that the collar is "rotatable to set a desired dose of the medicament" and that the plunger is "movably disposed in said collar" and "axially movable with respect to said collar to selectively draw in the medicament according to said set desired dose." The claim language does not require a mechanical stop to physically limit the axial movement of the plunger with respect to the collar.

Moorhouse discloses a syringe with a collar that is rotatable to move the collar axially to set a desired dose and a plunger that is movable to selectively draw in medicament according to the set desired dose. Specifically, in operation, an operator presses downwardly on the handle of the syringe until the operator senses the end of the filling stroke, then the operator releases the handle so that a spring biases the plunger upwardly to draw in material, and then the operator presses downwardly again on the handle to discharge the material from the syringe. *Id.* at col. 3, l. 52 – col. 4, l. 64; Figs. 2–4. An object of Moorhouse's invention includes means to adjust the stroke of the piston to "predetermine the quantity of said material drawn in." Moorhouse, col. 1, ll. 39–40; *see also id.* at col. 1, ll. 45–47, col. 3, ll. 5–7. Moorhouse describes, with reference to Figure 6, that the filling stroke can be adjusted by threading portion 47 of member 42 further into passage 22 to shorten the distance between the shoulder 33 and the end wall 18. *Id.* at col. 4, ll. 31–35; *compare id.* at Fig. 3 *with id.* at Fig. 6. Moorhouse also discloses that in operation, as the operator pushes downwardly on the handle 40, the operator will "readily sense" the end of the filling stroke with the compression of the spring 58 to the point where

the spring 57 is moved to engage end wall 18 due to the increase in pressure required to compress both springs. *Id.* at col. 3, l. 72 – col. 4, l. 7. Moorhouse states that the length of this stroke determines the amount of material that is drawn into the syringe once the handle is released and the compressed spring 58 forces plunger 25 back up. *Id.* at col. 4, ll. 7–13. The upward motion of plunger 25, and thus the dosage drawn in to the syringe, is limited by engagement of stop member 55 on the plunger with the lower surface of member 42. Fig. 3.

It is true that once the operator of Moorhouse senses the end of the filling stroke, there is nothing physically stopping the operator from continuing to press downwardly on the handle. Rotation of member 42, however, does adjust the point at which the operator, during downward movement of the handle, receives tactile feedback that the amount of axial movement of the plunger corresponds to the desired filling amount, e.g., a desired dose. Also, rotation of member 42 adjusts the axial position of a mechanical stop that physically stops the upward movement of the handle/plunger during drawing in of the material.

We find that adjustment of member 42 to "predetermine the quantity of said material drawn in" in the manner disclosed in Moorhouse meets the claim language "to set a desired dose of the medicament." Moorhouse's syringe allows an operator to draw a predetermined desired dose without having to visually monitor the amount of medicament during the drawing operation. Also, Moorhouse's plunger is axially movable within respect to member 42 to selectively draw in the predetermined desired dose.

Appellant further argues that Moorhouse "teaches away from dose setting by a collar rotatably disposed in a body of a syringe." Appeal Br. 8 (citing Moorhouse's teaching that indicia are not provided to indicate exact measurement because an experienced operator can readily determine the proper adjustment of the device as to the length of the filling stroke).[2] For the reasons set forth above, we find that Moorhouse teaches dose setting. Moorhouse teaches that indicia to indicate an exact measurement of the amount of material are not necessary in this art of artificial insemination of hens because operators can rely on their experience to readily determine the proper adjustment of the device to achieve the appropriate filling stroke and thus desired amount of semen. This disclosure is not a teaching away from setting a desired dose. Instead, this statement indicates that indicia showing operators an exact measurement of the dose may not be necessary in this art because experienced operators will be able to readily determine the desired dose. Nonetheless, the syringe allows the operator to adjust member 42 to set a desired dose.

For these reasons, Appellant has not identified an error in the Examiner's rejection of claims 1–3, 6, 7, 12, 13, 16, and 17 as anticipated by Moorhouse. Thus, we affirm the first ground of rejection.

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[2] Even if Moorhouse teaches away, it can still anticipate if there are no structural differences between the claimed subject matter and the structure disclosed in the prior art reference. *See Celeritas Techs., Ltd. v. Rockwell Int'l Corp.*, 150 F.3d 1354, 1361 (Fed. Cir. 1998) ("[T]he question whether a reference 'teaches away' from the invention is inapplicable to an anticipation analysis."). We understand this argument to be in support of Appellant's position that Moorhouse does not teach setting the dose.

*Second Ground of Rejection: Obviousness over Ogier, Botich, and Porat*

Appellant contends that the Examiner erred in rejecting claim 1 because Ogier does not teach that its tube 2 can be moved axially by rotational movement of the tube. Appeal Br. 9. Appellant explains that in Ogier, the lug 2c rides along an axial track 1f to allow for axial movement of the tube 2 within tube 1, and the only rotational movement of tube 2 is when lug 2c is rotated into indentation 1e, and this rotational movement does not result in axial movement of the tube. *Id.* at 9–10. Appellant fails to address in its Appeal Brief the explicit suggestion in Ogier of a modification to the axial track 1f to make it helical. Ogier 4 (machine translation). The Examiner relied on this explicit teaching in Ogier of a helical arrangement in the ground of rejection. Final Act. 6. Only in the Reply Brief does Appellant acknowledge that Ogier discloses another "embodiment" in which the track 1f is "possibly helical." Reply Br 2. Appellant contends that this disclosure is insufficient to render the claimed invention obvious because Ogier does not teach how this helical track can be implemented. *Id.* Appellant argues that the Examiner's reliance on the teachings in Botich and Porat is insufficient to fill the gap in Ogier's disclosure. *Id.* at 3.

We agree with the Examiner that a person having ordinary skill in the art would understand "helical" to mean "spiral" in shape. Ans. 8. We further agree that "the use of helical screw threads . . . translate[s] a rotational movement into an axial movement." Ans. 6 (discussing Moorhouse's helical threads, but equally applicable to Ogier's helical track embodiment). As evidenced by the additional references cited by the Examiner, a person having ordinary skill in the art would readily understand how to use a helical slot in place of a bayonet-type fitting, such as depicted

in Ogier. *See* Botich, col. 12, ll. 18–26 (describing in the syringe art that instead of using a detent and sealing ring to retain a cartridge within a housing, other engaging means such as screw threads or bayonet slots could be used); Porat, col. 1, l. 38 – col. 2, l. 13 (describing a syringe having corresponding threads on the inside of outer housing 1 and on the outside of casing 5 so that rotation of casing 5 within housing 1 causes axial movement of casing 5 and adjustment of space 17). The implementation of a helical slot in place of a bayonet-type fitting is the predictable use of prior art elements according to their established functions. *KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007). To Appellant's argument that the claimed collar would not have been obvious because Ogier fails to describe explicitly implementation of its alternate helical embodiment, "[a] person of ordinary skill is also a person of ordinary creativity, not an automaton." *Id.* at 421.

For these reasons, Appellant has not identified an error in the Examiner's rejection of claims 1, 6, 7, 12–14, 16, and 17 as unpatentable over Ogier, Botich, and Porat. Thus, we affirm the second ground of rejection.

*Remaining Grounds of Rejection*

Appellant argues only that the remaining grounds of rejection should be reversed because the addition of Brown, Ogier '231, and Veasey do not cure the deficiencies of the combination of Ogier, Botich, and Porat with regard to claim 1. Appeal Br. 11–12. Finding no such deficiencies, we likewise sustain the rejections of dependent claims 2, 3, and 8–11.

## DECISION

The decision of the Examiner rejecting claims 1–3, 6, 8–14, 16, and 17 is affirmed.

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