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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte HENRIK BYGBJERG, STEEN GAARSTED KRISTENSEN,
CARSTEN WINDT, and JENS TOFT JEPSEN

Appeal 2018-001992
Application 13/703,906
Technology Center 3700

Before BRETT C. MARTIN, JEREMY M. PLENZLER, and
ALYSSA A. FINAMORE, *Administrative Patent Judges*.

PLENZLER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants seek our review under 35 U.S.C. § 134 of the Examiner's Decision rejecting claims 1, 3, 7–9, 11, and 13–16 under 35 U.S.C. § 103(a) as being unpatentable over Newman (US 822,546, issued June 5, 1906) and Fecht (US 7,370,815 B2, issued May 13, 2008).¹ We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART.

¹ Claims 2, 4–6, 10, and 12 have been cancelled.

CLAIMED SUBJECT MATTER

Claims 1 and 16 are independent, with claims 3, 7–9, 11, and 13–15 depending from claim 1. Claim 1 is representative of the claims on appeal, and is reproduced below:

1. A spray head comprising:
 - a body defining a central axis and further comprising a fixation structure for fixing the spray head to a fluid supply system,
 - a fluid inlet, directing fluid into an interior of the body in a first direction,
 - a plurality of outlet holes arranged around the central axis, each outlet hole of the plurality of outlet holes comprising an initial passage section fluidly connected directly to the interior of the body, and
 - a flow path through the interior of the body between the inlet and the holes,
 - wherein a first set of the plurality of outlet holes is oriented to direct the fluid leaving the first set of the plurality of outlet holes in a second direction opposite to the first direction,
 - wherein the body further comprises an arrangement for holding a fire actuation member,
 - wherein an angle formed between the first direction of the fluid and the second direction is in the range between 140–160 degrees,
 - wherein the first set of the plurality of outlet holes is located at a smaller radial distance from the central axis than a second set of the plurality of outlet holes,
 - wherein the first set of the plurality of outlet holes is located closer to the fluid inlet than the second set of the plurality of outlet holes,
 - wherein the second set of the plurality of outlet holes is oriented to direct the fluid leaving the second set of the plurality of outlet holes in a third direction, wherein an angle formed

between the first direction and the third direction is in the range between 89–139 degrees, and

wherein the initial passage section takes an essentially cylindrical shape, and being in fluid communication with an expansion section having an essentially conical shape extending all the way from the initial passage section to an exterior of the body.

OPINION

The Examiner finds that Newman teaches the majority of the limitations recited in claim 1, including “an arrangement [in the body of the spray head] for holding a fire actuation member.” Final Act. 3 (noting “arrangement (inside 22 or 21 [of Newman]) for holding a fire actuation member (a valve or fire actuation member is fully capable of being placed in element 21 or 22[])”); *see also id.* at 8 (explaining “the [E]xaminer i[s] not modifying Ne[w]man to include a fire actuation member . . . the claims just require the body of Newman to have an arraignment that is capable of holding a fire actuation member” and “Newman shows a section inside 21 or 22 that is being considered the [arrangement],” which “is fully capable of holding a fire actuation member.”).

Appellants dispute this finding. *See* Appeal Br. 15–16. Appellants do not identify any particular structure required by the recited “arrangement,” but contend, for example, that “the inside of Newman’s ordinary fire hose 21 and shell 22 of the nozzle form a fluid passage for transporting water from a fire hydrant to the outlets 23, 24, and 25” and “positioning a fire actuation member within fire hose 21 or shell 22 would block water flow to Newman’s nozzle.” *Id.* (citing Newman, Fig. 3).

The Examiner responds to Appellants' contention, noting that "[t]he [S]pecification of the present application defines the '[arrangement] *for holding a fire actuation member*' to be element 5" and "the claim does not provide any other structure that further defines the housing other than just that it is capable of holding a fire actuation member." Ans. 4. The Examiner makes clear that the finding regarding the recited "arrangement" is based on "Newman ha[ving] a space that could hold a fire actuation member" because "[t]hat is all the claim requires." *Id.* Appellants disagree, "not[ing] the Examiner appears to acknowledge that some additional structure on the body is required for the recited *arrangement for holding a fire actuation member*," and "submit[ting] that element 5 in the drawings is not merely 'a housing that creates an empty space inside it,' but rather a structure that is able to couple a fire actuation member to the body." Reply Br. 4. Again, without identifying any particular structure required by the recited "arrangement," Appellants contend that "Newman does not teach such an additional structure." *Id.*

We agree with Appellants, as well as the Examiner, that the "arrangement" requires some sort of structure. The issue is whether Newman teaches the required structure. Because there is some dispute as to what structure that "arrangement" requires, we begin by construing that limitation. *See Medichem, S.A. v. Rolabo, S.L.*, 353 F.3d 928, 933 (Fed. Cir. 2003) ("The first step in both [anticipation and obviousness] analyses is a proper construction of the claims."). Based on the language of claim 1, we know what function the "arrangement" performs, it "hold[s] a fire actuation member." We know nothing, however, regarding what structure is associated with the "arrangement." Neither Appellants, nor the Examiner,

proposes an express construction of that term, and we have no reason to believe that “an arrangement for holding a fire actuation member” is understood by persons of ordinary skill in the art as the name for any particular structure. Therefore, we determine that the “arrangement” is a means-plus-function term, subject to 35 U.S.C. § 112, sixth paragraph.

The standard for determining whether a limitation is a means-plus-function term is not based merely on the presence or absence of the word “means,” but, rather, is based on “whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015) (internal citation omitted). As Appellants do not propose any particular construction, Appellants do not contend that “an arrangement for holding a fire actuation member” is understood as the name for any particular structure.² Although there is a presumption that a limitation lacking the word “means” is not subject to § 112, sixth paragraph, that presumption is overcome when it is “demonstrate[d] that the claim term fails to ‘recite sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” *Id.* As noted above, claim 1 recites function “without reciting sufficient structure for performing that function.” In fact, claim 1 simply recites “arrangement,” without *any* additional structure, for performing the recited function. *See id.* at 1350 (“Generic terms such as ‘mechanism,’ ‘element,’ ‘device,’ and other nonce words that reflect nothing

² Appellants include a Declaration from one inventor, Henrik Bygbjerg, at Appendix A of the Appeal Brief (the “Declaration”). The Declaration also fails to establish that “an arrangement for holding a fire actuation member” is understood as the name for any particular structure.

more than verbal constructs may be used in a claim in a manner that is tantamount to using the word ‘means’ because they ‘typically do not connote sufficiently definite structure’ and therefore may invoke § 112, para. 6.”).

A means-plus-function limitation “shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” 35 U.S.C. § 112, sixth paragraph. As Appellants note (Reply Br. 4), the Specification describes the recited “arrangement” as “an arrangement 5 for holding a fire actuation member, here a glass ampoule (not shown)” (Spec. ¶ 40), which is illustrated in Appellants’ corresponding Figures 1a and 1b. We find no other description of the recited “arrangement” in the Specification.

Accordingly, we construe the “arrangement” recited in claim 1 as requiring the structure of “arrangement 5” from Appellants’ Specification, or equivalents thereof.

Applying the construction of the “arrangement for holding a fire actuation member” noted above, we note that the Examiner makes no finding regarding, nor do we see, any structure in Newman that is the same as Appellants’ “arrangement 5.” The Examiner also makes no determination as to what would be an equivalent to that structure. We decline to speculate as to what would qualify as an equivalent structure, and leave it to the Examiner to make such a determination and whether Newman teaches such equivalent structure.³

³ That we do not sustain the Examiner’s decision to reject claim 1, should not be viewed as indication that the claim is patentable. Rather, our decision is based only on the Examiner’s failure to make any finding regarding the structure required by the “arrangement” limitation discussed above. We note that such structure, itself, appears to be well-known in the art, because,

The stated bases for the rejection of dependent claims 3, 7–9, 11, and 13–15 do not cure the deficiencies noted above. Accordingly, we do not sustain the Examiner’s decision to reject claims 1, 3, 7–9, 11, and 13–15.

Claim 16

Claim 16 recites limitations similar to those recited in claim 1, but does not include “an arrangement for holding a fire actuation member.” The Examiner finds that Newman teaches the majority of the limitations recited in claim 16. Final Act. 2–3. The Examiner acknowledges that Newman “fails to specifically disclose that that each hole comprises an expansion passage section, wherein the initial passage section takes an essentially cylindrical shape, and . . . the expansion passage section takes an essentially conical shape” with “the conical shaped section extending all the way from the second end of the initial passage to the exterior of the body.” *Id.* at 3. The Examiner cites Fecht as “teach[ing] a nozzle having a fluid passageways with an expansion passage section (60, fig 9), wherein the initial passage section takes an essentially cylindrical shape, and . . . the expansion passage section takes an essentially conical shape” with “the conical shaped section extending all the way from the second end of the initial passage to the exterior of the body.” *Id.* The Examiner reasons that “it would have been obvious to one of ordinary skill in the replace the nozzles of Newman with

as noted above, Appellants provide effectively no description in their Specification of the corresponding structure. *See Lindemann Maschinenfabrik GMBH v. Am. Hoist & Derrick Co.*, 730 F.2d 1452, 1463 (Fed. Cir. 1984) (explaining that “the specification need not disclose what is well known in the art”); *see also In re Myers*, 410 F.2d 420, 424 (CCPA 1969) (“A specification is directed to those skilled in the art and need not teach or point out in detail that which is well-known in the art.”).

those of Fecht . . . in order to produce a full conical spray pattern as taught by Fecht.” *Id.* (citing Fecht 6:36).

Appellants do not dispute the Examiner’s findings, other than that related to Newman teaching “a spray head.” *See* Appeal Br. 17–20. With respect to the “spray head,” Appellants contend that “Newman teaches a water flow nozzle, where a stream of water exits the nozzle openings/holes . . . but does not teach a spray head, which generates a mist of water (i.e. small drops) as in the spray head of the present application.” *Id.* at 19 (citing Spec. ¶ 27). That contention is unpersuasive because Appellants offer no explanation as to why “generat[ing] a mist of water (i.e. small drops)” is a requirement for something to be considered a “spray head.” Paragraph 27 of the Specification, cited by Appellants, simply states that “[i]n one embodiment of the invention the holes comprise an expansion passage section,” which “aid to form a fluid mist.” Claim 16 specifically recites the structure of the passages that purportedly produce the mist (i.e., the “plurality of outlet holes”). We are apprised of no persuasive reason to read the additional “mist” requirement into the claim.

The remainder of Appellants’ contentions are directed to disputing the Examiner’s rationale for modifying Newman’s teachings based on those of Fecht. *See* Appeal Br. 18–19. Appellants contend, for example, that “a person of ordinary skill in the art would not have found it obvious to modify Newman’s spay pattern ‘in order to produce a full conical spray pattern’ since Newman teaches that its nozzles already cover the greatest possible area with water.” *Id.* at 18 (citing Declaration ¶ 7).⁴ Appellants contend that

⁴ Paragraph 7 of the Declaration simply repeats the quoted portion of the Appeal Brief.

the combined teachings of Newman and Fecht “would lead one of ordinary skill in the art to believe that the modification would reduce the effectiveness of Newman’s fire fighting nozzle by spraying something less than ‘a sheet of water covering the greatest possible area’ as taught by Newman.” *Id.* Appellants also contend that “the Examiner has not provided a [sufficient] reason that one of ordinary skill in the art would want a conical spray pattern from each of the nozzle outlets 23, 24, and 25” in Newman, and alleges impermissible hindsight. Appeal Br. 19. Appellants’ contentions are not persuasive.

Appellants do not dispute, for example, the Examiner’s finding that “each individual nozzle of Newman will create a wider spray pattern than it did prior to the proposed modification because of the conical outlet.”

Ans. 3. Instead, Appellants contend that “the Examiner has not provided any evidence to support the assertion that increasing the spray pattern of each individual nozzle would necessarily increase the overall spray pattern of the spray head simply because a conical nozzle creates a wider spray pattern than a straight nozzle.” Reply Br. 4. If a single conical nozzle has a wider spray pattern than a single straight nozzle, we are persuaded that an array of conical nozzles arranged in the same orientation as an array of straight nozzles would also have a wider spray pattern than those straight nozzles. Appellants offer no persuasive argument or evidence to the contrary.

Appellants also fail to explain in any persuasive manner, any alleged reduced effectiveness of the modified nozzle in Newman. As the Examiner notes, because “each of the nozzles would create a larger spray pattern, the spray head of Newman as modified by Fecht would have a larger spray

pattern than that of the spray head of just Newman,” which “would be helpful in the Newman.” Ans. 3. If anything, the use of a larger spray pattern may reduce the distance of the spray, as Appellants contend. *See* Reply Br. 3. That, however, simply identifies a trade-off between coverage area and spray distance, and does not identify error in the Examiner’s rejection.

Based on the record before us, and for the reasons set forth above, the preponderance of the evidence supports the Examiner’s decision to reject claim 16.

DECISION

We REVERSE the Examiner’s decision to reject claims 1, 3, 7–9, 11, and 13–15.

We AFFIRM the Examiner’s decision to reject claim 16.

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-IN-PART