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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JAMES L. MCNAUGHTON and ERIC W. LIIMATTA¹

Appeal 2015-005572
Application 11/722,641
Technology Center 1600

Before MELANIE L. MCCOLLUM, TAWEN CHANG, and
DAVID COTTA, *Administrative Patent Judges*.

COTTA, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 involving claims to a method of processing a four-legged slaughter animal. The Examiner rejected the claims on appeal as obvious under 35 U.S.C. § 103(a).

We affirm.

¹ Appellants identify the real party in interest as Albemarle Corporation.
Br. 1.

STATEMENT OF THE CASE

Claims 1, 3, 5, 16, 29, 30, 36, 37, 40, 41, 45, 46, 53, 56, 65, 68, 73, 75–80, 84, 89, and 90 are on appeal. Claim 1 is illustrative and reads as follows:

1. A method of processing a four-legged slaughter animal selected from cattle, swine, horses, sheep, bison, rabbit, camel, kangaroo, alligator, crocodile, buffalo, goats, llamas, deer, antelope, elk, squirrel, opossum, raccoon, and nutria for consumption as meat and/or meat product(s), said method comprising:

contacting a carcass of said animal, after exsanguination, with a microbiocidal solution, and/or

contacting at least one raw meat product and/or at least one processed meat product derived from said carcass at least once with a microbiocidal solution wherein each said microbiocidal solution, independently, consists of:

water having a bromine residual derived from (i) at least one alkali metal bromide, and/or at least one alkaline earth metal bromide, and (ii) at least one alkali metal hypohalite and/or at least one alkaline earth metal hypohalite;

the bromine residual in each microbiocidal solution being sufficient to provide microbiocidal activity.

The Examiner rejected claims 1, 3, 5, 16, 29, 30, 36, 37, 40, 41, 45, 46, 53, 56, 65, 68, 73, 75–80, 84, 89, and 90 as unpatentable under 35 U.S.C. § 103(a) over the combination of Howarth,² Hei,³ Gil,⁴ Shuman,⁵

² Howarth, US Patent No. 6,908,636 B2, issued June 21, 2005 (“Howarth”).

³ Hei et al., US Patent No. 6,534,075 B1, issued Mar. 18, 2003 (“Hei”).

⁴ Gil, THE MICROBIOLOGY OF MEAT AND POULTRY 118–57 (Andrew Davies et al. eds. 1998) (“Gil”).

⁵ Shuman et al., US Patent Pub. No. 2004/0052702 A1, pub. Mar. 18, 2004 (“Shuman”).

Austin,⁶ McFarland,⁷ Brent,⁸ Ingemanson,⁹ and Mason.¹⁰

ANALYSIS

Appellants argue claims 1, 3, 5, 16, 29, 30, 36, 37, 40, 41, 45, 46, 53, 56, 65, 68, 73, 75–80, 84, 89, and 90 together as a group. We designate claim 1 as representative of the group.

The Examiner found that Howarth taught a methods of slaughtering and processing poultry using a combination of an alkali metal bromide (sodium bromide) and an alkali metal hypohalite (sodium hypochlorite – i.e. bleach) to reduce bacterial contamination. Final Act. 4–5. Howarth, however, does not expressly discloses processing four-legged slaughter animals as recited in claim 1. *Id.* at 10. The Examiner found that this element was disclosed in Hei, which discloses a method of reducing the microbial or viral count on four-legged slaughter animals such as beef. *Id.* at 7. The Examiner also found that Gil disclosed “guidelines for the processing of cattle with critical control points and the obvious steps of decontamination, bleeding, head and shank removal, skinning, washing, bacterial rinse, final wash, etc” *Id.* at 8.

Based on the combined teachings of Howarth, Hei and Gil the Examiner concluded:

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to perform the method

⁶ Austin, US Patent No. 5,707,594, issued Jan. 13, 1998 (“Austin”).

⁷ McFarland, US Patent No. 5,603,972, issued Feb. 18, 1997 (“McFarland”).

⁸ Brent, US Patent No. 5,124,125, issued June 23, 1992 (“Brent”).

⁹ Ingemanson, US Patent No. 6,863,864 B1, issued Mar. 8, 2005 (“Ingemanson”).

¹⁰ Mason et al., *The Uses of Ultrasound in Food Technology*, 3 ULTRASONICS SONOCHEMISTRY S253-60 (1996) (“Mason”).

of Howarth in processing the carcasses/meat products of the four-legged slaughter animals instantly claimed, as suggested by Hei et al. and Gil One of ordinary skill in the art would have been motivated to do this because both Hei et al. and Howarth are directed to decontamination of carcasses for consumption as meat and/or meat products and it does not require any inventive skill to apply the composition used in the methods of Howarth to decontaminate microorganisms on at least the beef carcasses of Hei [I]t will act as an antimicrobial whether it is applied to a bull, cow, steer, nutria, deer, hog, boar, pig or any other four-legged slaughter animal.

Id. at 10–11.

Appellants argue that Howarth discloses a composition — 1,3-dibromo-5,5-dimethylhydantoin (DBDMH) — that is more effective than the combination of sodium bromide and bleach. App. Br. 8–9. More specifically, Appellants argue that DBDMH has an effectiveness of 99.999% while sodium bromide/bleach mixtures ranged from 0.408% to 85%. *Id.* at 9. Thus, Appellants contend: “The results in Howarth would have taught a person of ordinary skill in the art that DBDMH was consistently a more effective biocide than sodium bromide/bleach mixtures.” *Id.* at 10. We are not persuaded.

That Howarth discloses DBDMH to be more effective than mixtures of sodium bromide/bleach does not change the fact that sodium bromide/bleach was disclosed as an effective microbiocide for use on animal carcasses. *See In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994) (finding the use of epoxy obvious even though the art taught “deficiencies of epoxy-impregnated material,” noting “[a] known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use”).

Appellants argue that the inventive composition in Hei requires three species: a quaternary ammonium compound, a metal halide and an oxidant. Relying on the September 17, 2013 Declaration of the inventor, Eric Liimatta (“First Declaration”), and three references cited in an Information Disclosure Statement, Appellants argue that quaternary ammonium is not compatible with hypochlorites. App. Br. 10–11. We are not persuaded.

As an initial matter, Appellants are attacking the references individually, ignoring Howarth’s teaching that the combination of sodium bromide and bleach can be used as a microbiocide to treat meat. One cannot show nonobviousness by attacking references individually when the rejection is based on a combination of references. *In re Keller*, 642 F.2d 413, 426 (CCPA 1981). In addition, given that the Examiner relied upon Howarth’s disclosure of the claimed microbiocide, the importance of Hei lies in its disclosure of treating four-legged slaughter animals with a microbiocide. *See Hei*, col. 21, ll. 33–34. This teaching is not negated by Hei’s disclosure of a composition that is incompatible with bleach.

Appellants argue that Shuman, Austin, McFarland, Brent, Ingemanson and Mason — all of which disclose methods of reducing microbial contamination through non-chemical means (e.g. using radiation) — teach away from the claimed invention by discouraging the use of chemical biocides. App. Br. 11–14. For example, Appellants argue that the purpose of Shuman’s invention was to sterilize “without the use of foodstuff altering chemicals” and that Shuman teaches that “the chemicals used [for sterilization] are costly and may leave a residue.” *Id.* at 11–12. We are not persuaded.

The use of chemical disinfectants in connection with food processing was well known. *See, e.g.*, Spec. ¶ 1 (describing the use of chemicals like acids and chlorine-based biocidal agents in animal processing as “typical[]”). Prior art statements regarding the advantages of non-chemical treatments or the disadvantages of chemical treatments are insufficient to teach away from the use of chemical microbiocides to disinfect food. *See Gurley*, 27 F.3d at 553. That non-chemical disinfecting means exist does not make Appellants’ chemical disinfectant any less obvious.

Finally, Appellants argue that unexpected results support the patentability of their composition. Appellants rely upon testing in the Specification comparing the beef discoloring effects of bleach, diluted bleach, lactic acid, and Stabrom[®] 909 as support for their unexpected results argument. App. Br. 15. This testing cannot support a finding of unexpected results because none of the four compositions tested falls within the scope of the claim 1, which precludes microbiocidal components in addition to the two recited in the claim. *Id.* at fn. 1.

Appellants also cite to the May 21, 2014 Declaration of the inventor, Eric Liimatta (“Second Declaration”), as support for its unexpected results argument. App. Br. 15. The Second Declaration provides test results showing no change in coloration for steak treated with a composition falling within the scope of the claims. Second Declaration ¶¶ 15, 21. The Second Declaration, however, does not provide any comparative testing. Moreover, the testing described in the Second Declaration cannot be fairly be compared to the results of testing bleach, diluted bleach, and lactic acid described in the Specification because the tests were different. The Second Declaration describes two discoloration tests. In the first test, pieces of steak were

sprayed with the claimed composition for 10 seconds and allowed to drain for one minute. *Id.* ¶ 11. In the second test, the claimed composition was “applied in the carcass wash” at a commercial beef processing plant. *Id.* ¶¶ 16, 18. In contrast, the Specification describes discoloration tests where beef samples were soaked in the test compositions for 5 minutes.

Specification ¶ 84. The differences in test conditions make the comparison of discoloration results unhelpful. We have no way of knowing whether the compositions tested in the Specification would result in discoloration if they were used in a 10 second spray or a “carcass wash” of unspecified duration. Similarly, we have no way of knowing whether the claimed composition would produce discoloration if beef were soaked in it for 5 minutes.

Accordingly, we affirm the Examiner’s rejection of claim 1 as obvious under 35 U.S.C. § 103(a) over the combination of Howarth, Hei, Gil, Shuman, Austin, McFarland, Brent, Ingemanson, and Mason. Because they were not argued separately, we also affirm the Examiner’s rejection of claims 3, 5, 16, 29, 30, 36, 37, 40, 41, 45, 46, 53, 56, 65, 68, 73, 75–80, 84, 89, and 90.

SUMMARY

For these reasons and those set forth in the Examiner's Answer, the Examiner’s final decision to reject claims 1, 3, 5, 16, 29, 30, 36, 37, 40, 41, 45, 46, 53, 56, 65, 68, 73, 75–80, 84, 89, and 90 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) (1).

AFFIRMED