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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KERRI CLARK, BRIAN HAWTHORNE,
MAXIMILIANO RODRIGUEZ, ALLEN SYDNEY ALDRIDGE,
CHRISTOPHER J. FELTMAN, ALEJAMDRA BUITRAGO, and
SIMON RICHARD GAINEY

Appeal 2017-001253
Application 13/880,084¹
Technology Center 3700

Before STEFAN STAICOVICI, EDWARD A. BROWN, and
ARTHUR M. PESLAK, *Administrative Patent Judges.*

STAICOVICI, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Kerri Clark et al. (“Appellants”) appeal under 35 U.S.C. § 134(a) from the Examiner’s decision in the Final Office Action (dated Oct. 23, 2015, hereinafter “Final Act.”) rejecting claims 1 and 3–9 under 35 U.S.C. § 103(a) as being unpatentable over Helps et al. (EP 1 801 032 A1,

¹ According to Appellants’ Appeal Brief (filed June 20, 2016, hereinafter “Appeal Br.”), Intercontinental Great Brands LLC is the real party in interest. Appeal Br. 1.

published June 27, 2007, hereinafter “Helps”) and Burrows (US 7,192,628 B2, issued Mar. 20, 2007).^{2,3}

Appellants’ representative presented oral argument on October 31, 2018. We have jurisdiction over this appeal under 35 U.S.C. § 6(b).

SUMMARY OF DECISION

We AFFIRM.

INVENTION

Appellants’ invention is directed “to a package closure using magnetic material.” Spec. 1, ll. 14–15.

Claim 1, the sole independent claim, is representative of the claimed invention and reads as follows:

1. A package for containing and dispensing contents comprising:
 - a housing having a package interior for accommodating said contents;
 - said housing including a pair of package portions and defining an opening for accessing said package interior;
 - a closure formed of magnetic material applied to at least one of said packaging portions for permitting re-openable closure of said package portions, said closure having a magnetic field strength of between about 50-400 gauss, measured at a

² Claim 2 is canceled. Appellants’ Amendment 3 (filed July 21, 2015).

³ The Examiner has withdrawn the rejection of claims 1 and 7 under 35 U.S.C. § 112, second paragraph, as being indefinite, and the rejection of claims 1, 8, and 9 on the ground of nonstatutory double patenting over claim 1 of Bourbeau et al. (US 8,893,955 B2, issued Nov. 25, 2014). *See* Examiner’s Answer 2 (dated Sept. 8, 2016, hereinafter “Ans.”); *see also* Final Act. 2, 5–6.

distance of no greater than 1mm and said magnetic field strength is no greater than about 10 gauss measured at a distance of 5mm.

ANALYSIS

Appellants have not presented arguments for the patentability of claims 3–9 apart from claim 1. *See* Appeal Br. 3–7. Therefore, in accordance with 37 C.F.R. § 41.37(c)(1)(iv), we select claim 1 as the representative claim to decide the appeal of the rejection of these claims, with claims 3–9 standing or falling with claim 1.

The Examiner finds that Helps discloses a package including a housing 10 having an interior for holding contents, a pair of packaging housing portions 13, 14 defining an opening for accessing the interior, and a magnetic closure 30, 31. Final Act. 3 (citing Helps, Fig. 4). The Examiner further finds that Burrows discloses “a package which includes magnetic material having a magnetic field strength of between about 50-400 gauss, measured at a distance of no greater than 1 mm.” *Id.* (citing Burrows, col. 20, l. 35–col. 21, l. 32). Thus, the Examiner concludes that

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the closure of Helps to be of similar magnetic strength to the magnetic material of Burrows in order to provide a closure which does not require a thick, heavy magnetized material . . . but that still may be easily reopened and secured.

Id. (citing Burrows, col. 2, ll. 35–36). However, the Examiner finds that the combined teachings of Helps and Burrows fail to disclose a “magnetic field strength . . . no greater than about 10 gauss measured at a distance of 5mm.”

Id. As such, the Examiner further determines 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 magnetic material so that its magnetic field strength is no greater than about 10 gauss measured at a distance of 5mm for manufacturer preference, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Id. at 3–4 (citing *In re Boesch*, 617 F.2d 272 (CCPA 1980)).

Appellants argue that “the Examiner’s determination of obviousness is based on impermissible hindsight” because the Examiner purportedly has used Appellants’ own description of the problem and the solution provided to the problem. Appeal Br. 5–6. According to Appellants, “the variables optimized . . . were not those known to be considered effective” and the results obtained were “unexpectedly good.” *Id.* at 6. Appellants contend that “[t]he references of record” fail to disclose a magnetic field strength, as called for by claim 1. *Id.* at 5. Appellants further assert that Burrows does not contemplate selecting an appropriate magnetic field strength “such that it will not adversely impact certain devices which are susceptible to magnetic interference if placed in close proximity to a magnet.” Reply Brief 2 (filed Oct. 27, 2016, hereinafter “Reply Br.”).

We are not persuaded by Appellants’ arguments because the Examiner is correct that Burrows specifically discloses a magnetic field strength of about 50–400 gauss, measured at a distance of less than 1 mm, for magnetically attaching substrate 10 and play pieces 34. *See* Ans. 2 (citing Burrows, col. 20, l. 35–col. 21, l. 32). More specifically, Burrows discloses that when a magnetized layer 44 is placed adjacent to a substrate 10 with a non-magnetized, but magnetizable layer 14, “the magnetic field

from the layer 44 induces magnetism in the layer 14, and the magnetized layers attract.” Burrows, col. 12, ll. 15–20, Fig. 12 (bolding omitted). Burrows further discloses that “[t]he strength of the magnetic force is determined by the strength of the [magnetic] field from the magnetized layer 44, where it passes through the non-magnetized layer 14.” *Id.*, col. 12, ll. 20–23 (bolding omitted). Stated differently, when a permanently magnetized area interacts with a non-magnetized, but magnetizable area, the permanently magnetized area generates a magnetic field that induces magnetism in the non-magnetized area to form an attractive force determined by the strength of the magnetic field. Hence, the magnetic field strength is determined by the permanently magnetized area without contribution from the non-magnetized, but magnetizable area.

As noted above, the Examiner points to Burrows’ example of a maximum magnetic field strength of approximately 200 gauss between a permanently magnetized area 44 and a non-magnetized, but magnetizable area separated by 100 μm (0.1 mm). *See* Ans. 2; *see also* Burrows, col. 20, ll. 43–46, Fig. 13⁴. In view of the discussion above, this means that permanently magnetized area 44 generates a magnetic field having a strength of 200 gauss at a distance of 100 μm (0.1 mm) that induces magnetism in the non-magnetized area. Hence, the Examiner is correct in that Burrows discloses “a magnetic field strength of between about 50-400

⁴ As the top surface of the non-magnetized, but magnetizable area is 100 μm (0.1 mm) below the printed surface of substrate page 10, and the separation between permanently magnetized area 44 and the non-magnetized layer is likewise 100 μm (0.1 mm), we appreciate that play piece 34 is positioned adjacent to substrate page 10. *See* Burrows, col. 20, ll. 29–32, Figs. 13, 14.

gauss, measured at a distance of no greater than 1 mm,” as recited in claim 1. *See* Ans. 2. Additionally, the Examiner has provided a reason with rational underpinning to provide the magnetic field strength of Burrows to the magnetic closure 30, 31 of Helps, namely, “to provide a closure which does not require a thick, heavy magnetized material . . . but that still may be easily reopened and secured.” *See* Final Act. 3; *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds [require] some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”) (*cited with approval in KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007)). Appellants have not persuasively argued the Examiner’s findings or that the conclusion lacks rational underpinning.

Further, we note that it is well settled that where a variable is known to affect a particular desirable result, i.e., a “result-effective” variable, “it is not inventive to discover the optimum or workable ranges by routine experimentation,” because the desire to improve results would motivate skilled artisans to experiment with, and improve upon, known conditions in the prior art. *In re Applied Materials, Inc.*, 692 F.3d 1289, 1295–96 (Fed. Cir. 2012) (citations and quotations omitted). In this case, because Burrows discloses that one of “[t]he “key factors in creating a *magnetic interaction* between a permanently magnetized play piece [34] and a permanently magnetized play surface [10]” is “the strength of the induced [magnetic] fields,” Burrows discloses that the magnetic field strength affects a particular result, i.e., magnetic interaction, and, thus, constitutes a result-effective variable. Burrows, col. 10, ll. 24–31, col. 22, ll. 8–14, Figs. 1, 8 (emphasis added).

Burrows further discloses, as the Examiner correctly finds, that the magnetic field strength on one side 12 of substrate 10 should attract substrate 10 and play pieces 34, but should not magnetically affect the other side 12 of substrate 10. *See* Ans. 3 (citing Burrows, col. 21, ll. 43–57). Stated differently, Burrows discloses a magnetic field strength that creates a magnetic interaction for attracting substrate 10 and play pieces 34 on one side 12 of substrate 10, but at the same time does not magnetically affect the other side 12 of substrate 10. Hence, in contrast to Appellants’ argument, Burrows does contemplate selecting an appropriate magnetic field strength “which would not have adverse interaction with [other] magnetic attractable materials at a short distance from the magnets themselves.” Reply Br. 3. Therefore, in light of Burrows’ disclosure discussed *supra*, we agree with the Examiner that “[a]rriving at . . . [a] magnetic [field] strength . . . no greater than 10 gauss [measured at a distance of 5mm] is therefore within [the skill of] one of ordinary skill in the art as discovering the optimum value of a result[-]effective variable.” Ans. 3.

Lastly, as Burrows discloses a magnetic field strength that magnetically affects one side 12 of substrate 10, but not the other, we agree with the Examiner that in Burrows “it is desirable to not have a significant magnetic [field] strength when there is [a] distance equal to the thickness of the substrate [10].” Ans. 3 (citing Burrows, col. 7, ll. 36–37). Burrows discloses that the thickness of substrate 10 is 500 μm , which is 0.5 mm.⁵ *See*

⁵ Although the Examiner erroneously converts the thickness of substrate 10 from 500 μm to 5 mm, rather than 0.5 mm, the Examiner correctly points to column 7, lines 36–37 as evidence that Burrows discloses a substrate thickness of 500 μm .

Burrows, col. 7, ll. 36–37. Therefore, having an extremely low magnetic field strength of “no greater than about 10 gauss” at a distance of 5 mm, which is a distance that is ten times larger than the distance of Burrows, would be predictable and not “unexpected,” as Appellants urge.

In conclusion, for the foregoing reasons, we sustain the rejection under 35 U.S.C. § 103(a) of claim 1 as unpatentable over Helps and Burrows. Claims 3–9 fall with claim 1.

SUMMARY

The Examiner’s decision to reject claims 1 and 3–9 under 35 U.S.C. § 103(a) as unpatentable over Helps and Burrows 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)(iv).

AFFIRMED