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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JAMES A. HOUGH and TESFAMICHIEL FESHAZION

Appeal 2011-006938
Application 10/707,470
Technology Center 3700

Before JAMESON LEE, SALLY C. MEDLEY and
KRISTEN L. DROESCH, *Administrative Patent Judges*.

DROESCH, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellants seek review under 35 U.S.C. § 134(a) of a Final Rejection of claims 1-4, 6-8, 10-15 and 17-23[1]. We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

References Relied on by the Examiner

Kalbow	4,055,029	Oct. 25, 1977
Gelardi et al. ("Gelardi")	5,457,843	Oct. 17, 1995
Beeson	5,589,865	Dec. 31, 1996
Kikuchi et al. ("Kikuchi")	6,353,233 B1	Mar. 5, 2002
Kurita et al. ("Kurita")	6,529,704 B1	Mar. 4, 2003

Rejections on Appeal

Claims 1-3, 6-8, 11, 12, 15, 18, 20, 21 and 23 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Beeson and Gelardi.

Claim 4 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Beeson, Gelardi and Kikuchi.

Claims 10, 13, 14 and 17 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Beeson.

Claim 19 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Beeson, Gelardi and Kalbow.

Claim 22 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Beeson, Gelardi and Kurita.

The Invention

The Appellants disclose a cleaner for an optical sensor in a mailing machine. The cleaner includes a substrate sheet with strips of open cell foam adhered across the width of the sheet. The strips of open cell foam each have

[1] Claims 5, 9 and 16 have been cancelled.

a height which is vertically compressed when passing through paper feed path rollers. Spec. ¶¶ 0007, 0016-0018, 0021-0023, 0025.

Claim 1, reproduced from the Claim Appendix of the Appeal Brief, reads as follows (disputed limitations in *italics*):

> 1. A cleaning apparatus *for cleaning non-contact optical sensors in a paper handling device* comprising:
>
> a substrate sheet for feeding through a feed path of the paper handling device having a substrate width and a substrate length, a first surface and a second surface and having a substrate thickness, wherein the first surface has a front edge, a rear edge, a left edge and a right edge;
>
> a first strip of material having a first strip height and attached to the first surface of the substrate sheet across the entire width of the substrate and oriented perpendicular to the feed path, *wherein the first strip will vertically compress when drawn through a roller nip and partially vertically decompress when exiting the roller nip in order to engage the optical sensors below the feed path*;
>
> a second strip of material having a first strip height and attached to the first surface of the substrate sheet across the entire width of the substrate and oriented perpendicular to the feed path, *wherein the second strip will vertically compress when drawn through a roller nip and partially vertically decompress when exiting the roller nip in order to engage the optical sensors below the feed path*; and, wherein,
>
> the first strip is separated from the second strip in the direction of the feed path by a first distance; and
>
> the first strip height is relatively large compared to the substrate thickness and *the first strip height when partially decompressed is sufficiently large to extend below the feed path to engage the optical sensors*, and wherein the substrate length is greater than the substrate width.

ISSUES

1. Did the Examiner incorrectly determine that the combined teachings of Beeson and Gelardi would have rendered obvious a cleaning device capable of cleaning optical sensors?
2. Did the Examiner incorrectly determine that the combined teachings of Beeson and Gelardi would have rendered obvious a cleaning device with first and second strips of material capable of partially vertically decompressing when exiting a roller nip?
3. Does Beeson teach away from using a relatively high strip height?
4. Did the Examiner incorrectly determine that the combined teachings of Beeson, Gelardi and Kurita would have rendered obvious a cleaning device with first, second, third, fourth and fifth strips of material capable of partially vertically decompressing when exiting a roller nip?
5. Does Beeson teach away from a strip of material that is non-abrasive?

FINDINGS OF FACT ("FF")

<u>Beeson</u>

1. Beeson describes, referring to Beeson's figure 4 reproduced below, a cleaning media 30 for cleaning dried ink and contaminants on a printhead surface that includes a solvent pad 34 and an absorbent pad 36 attached to a backing sheet 32. Col. 4, ll. 57-62.

Beeson's figure 4 is below:

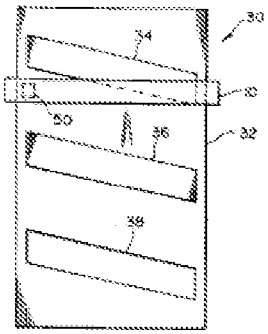

Figure 4 depicts a cleaning media.

2. Each pad 34, 36 is compliant and has a thickness (i.e., height) approximately twice the normal spacing distance between a printhead and conventional media (i.e., printing paper) such as 1 mm. Col. 2, ll. 54-57; col. 5, ll. 39-44.
3. The solvent pad 34 is formed of a compliant material having low abrasive characteristics, such as a tight-celled foam sponge. Col. 5, ll. 8-11.
4. The absorbent pad 36 is an antistatic pad having low abrasive characteristics, such as lint-free felt. Col. 5, ll. 21-23.
5. Beeson describes that the solvent pad 34 and absorbent pad 36 are each 2 mm thick. Col. 5, ll. 43-44.
6. In use, the cleaning media 30 is fed into the printer and moves through the printer along the media transport path. Col. 6, ll. 19-25.
7. The solvent pad 34 first encounters the printhead 10 and brushes against the printhead because the solvent pad thickness exceeds the separation distance between normal media and the printhead. Col. 6, ll. 26-30.

8. The relative movement between solvent pad 34 and printhead 10 defines a scrubbing action enabling the solvent to soften, dissolve and/or remove dried ink and particulate matter. Col. 6, ll. 30-33.
9. The absorbent pad 36 next encounters the printhead 10 and brushes against the printhead since the thickness of the absorbent pad also exceeds the separation distance between normal media and the printhead. Col. 6, ll. 44-52.
10. Beeson depicts, referring to Beeson's figure 7 reproduced below, the solvent pad 34 and absorbent pad 36 are thicker than the separation distance between the backing sheet 32 and the printhead 10 after passing beyond the printhead along the media transport path.

Beeson's figure 7 is below:

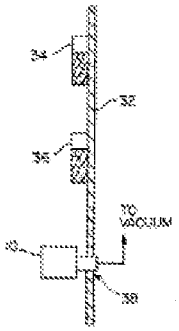

Figure 7 depicts the cleaning media in the media transport path.

<u>Gelardi</u>

11. Gelardi describes, referring to Gelardi's figure 7 reproduced below, a machine optics and paper path cleaner including a backing sheet 3 made of relatively rigid material, a cleaning sheet 5 made of flexible absorbent material, and multiple loops 31 that extend between the concurrent opposite side edges of the backing sheet 3 and cleaning sheet. Col. 5, ll. 26-35; col. 6, ll. 6-13.

Gelardi's figure 7 is below:

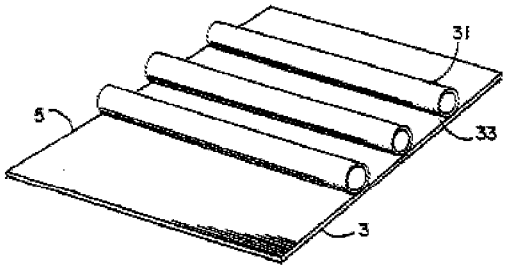

Figure 7 depicts the machine optics and paper path cleaner.

Kurita

12. Kurita describes, referring to Kurita's Figure 12(G) below, a sheet S formed of a sheet core layer s1 and including ridges P. Col. 20, ll. 9-21, 44-60.

Kurita's Figure 12(G) is below:

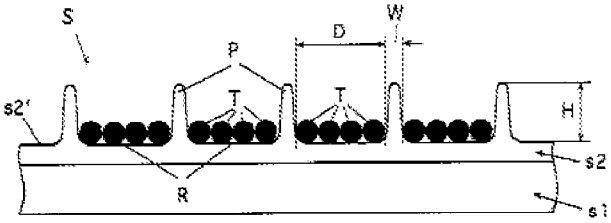

Figure 12 depicts a sheet.

ANALYSIS

Obviousness of Claims 1-3, 7, 8, 13, 15, 18 and 21 over Beeson and Gelardi

The Examiner relied on Beeson for describing all of the limitations of claim 1 with the exception of teaching that the first and second strips of material extend across the entire width of the substrate. Ans. 3-4. The Examiner relied on Gelardi for teaching a substrate with a length and width with strips of material 31 positioned widthwise across the entire substrate. Ans. 4 (citing Gelardi Fig. 7). The Examiner concluded that it would have been obvious to one with ordinary skill in the art at the time the invention

was made to modify Beeson's strips to span the entire width of the substrate as suggested by Gelardi. Ans. 4.

The Appellants argue that: 1) Beeson does not discuss cleaning optical sensors; 2) one with ordinary skill in the art would not look to Gelardi to modify Beeson because Beeson describes a print head cleaner that would have relatively short cleaning surfaces that would not extend to an optical sensor region; 3) the combination would not work for the Appellants' intended purpose of cleaning optical sensors; and 4) the combination would not work for the Appellants' intended purpose in a system having a feed path with roller nips. Br. 11-12.

We are unpersuaded by the Appellants' arguments. The Appellants' arguments are directed to the following statements of intended use: (1) "for cleaning optical sensors;" and (2) "in order to engage the optical sensors below the feed path." As pointed out by the Examiner, the Appellants do not positively claim a paper handling device with a roller nip or optical sensors. Ans. 10. Rather, as pointed out by the Examiner, the Appellants claim a cleaning apparatus *for* cleaning a paper handling device. Ans. 10 (emphasis in original). Whether a statement of purpose or intended use in the claim preamble and/or the body of the claim constitutes a limitation for the purpose of patentability is a matter to be determined on the facts of each case in view of the claimed invention as a whole. *In re Stencel*, 828 F.2d 751, 754-755 (Fed. Cir. 1987). We do not find that the Appellants' recitations "for cleaning optical sensors" and "in order to engage the optical sensors below the feed path" impart structural limitations that distinguish the claimed invention over the device taught by Beeson as modified by Gelardi.

The Appellants' arguments are also directed to the limitation: "wherein the . . . strip will vertically compress when drawn through a roller nip and partially vertically decompress when exiting the roller nip." We agree with the Examiner that the strips of material of the device taught by Beeson as modified by Gelardi would be capable of vertically compressing when drawn through a roller nip and partially vertically decompressing when exiting the roller nip. Ans. 10-11 (citing Beeson col. 5, ll. 21-24, 39; Fig. 5); *see* FFs 2-4. Furthermore, Beeson's teachings indicate that the solvent pad 34 and absorbent pad 36 are capable of vertically compressing and partially vertically decompressing because Beeson: (1) describes the thickness of the solvent pad 34 and absorbent pad 36 as exceeding the separation distance between normal media and the printhead 10; and (2) depicts the solvent pad 34 and absorbent pad 36 as thicker than the separation distance between the backing sheet 32 and the printhead 10 after passing beyond the printhead along the media transport path. Col. 6, ll. 26-30, 44-52; Fig. 7 (FFs 2, 5, 7, 9, 10). The Appellants do not direct us to objective evidence to demonstrate that the strips of material of the device taught by Beeson as modified by Gelardi would be incapable of vertically compressing when drawn through a roller nip and partially vertically decompressing when exiting the roller nip.

Related to the previous arguments, the Appellants further argue that: 1) Beeson's felt pad may not even compress through a nip as required by the claim; and 2) Beeson's solvent would be pressed out in the nip. Br. 11-12. The Appellants' arguments are speculative and unsupported by objective evidence. Argument of counsel cannot take the place of evidence lacking in

the record. *Meitzner v. Mindick*, 549 F.2d 775, 782 (CCPA 1977); *see also In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974).

For all these reasons, we sustain the Examiner's rejection of claims 1-3, 7, 8, 13, 15, 18 and 21 as obvious over Beeson and Gelardi.

Obviousness of Claims 4, 6, 10-14, 17, 19 and 20 Over the Applied Prior Art

The Appellants do not present substantive arguments addressing the limitations of dependent claims 4, 6, 10-14, 17, 19 and 20. Instead, the Appellants argue that claims 6, 11, 12, 19 are patentable over the cited references for at least the reasons described with reference to independent claim 1 and any intervening claims. Br. 13-15. The Appellants also argue that claims 4, 10, 13, 14, 17 and 20 are not obvious over the cited references because Beeson describes only cleaning the relatively near print heads while the claimed invention cleans optical sensors relatively distant from the paper path. Br. 12, 14, 15. For the same reasons as those explained above for claims 1-3, 7, 8, 13, 15, 18 and 21, we are unpersuaded by the Appellants argument regarding the intended use of the cleaning apparatus for cleaning optical sensors. Furthermore, the particular disclosed use of Beeson need not be preserved as the Appellants suggest. Rather, the use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned, as they are part of the literature and a relevant for all they contain. *In re Heck*, 699 F.2d 1331, 1333 (Fed. Cir. 1983), citing *In re Lemelson*, 397 F.2d 1006, 1009 (CCPA 1968).

Similarly, we are also unpersuaded by the Appellants' argument addressing claims 10, 13, 14 and 17, that Beeson teaches away from using a relatively high strip height because Beeson must clean the print heads. Br.

14. Beeson's teaching of cleaning printheads does not suggest that Beeson's strips would be unlikely to produce the objective sought by the Appellants invention. *See Syntex (U.S.A) v. Apotex, Inc.,* 407 F.3d 1371, 1380 (Fed. Cir. 2005), citing *In re Gurley,* 27 F.3d 551, 553 (Fed. Cir. 1994). The teaching of something different does not, by itself, constitute a teaching away.

Addressing claim 20, Appellants argue that Beeson "is not suitable for its intended purpose in a system having such a notched surface," and "[a]ccordingly it would not have been obvious to make the combination suggested by the Examiner." Br. 15. However, claim 20 does not recite a notched surface. Rather, dependent claim 19 recites: "the first strip includes a top surface and has the shape of a rectangular prism having at least one notch in the top surface." To the extent that the Appellants' argument addresses the limitations of claim 19, Appellants' argument attacks the Beeson reference individually rather than addressing the combined teachings of the references. The Examiner relied on the combination of Beeson, Gelardi and Kalbow for teaching the limitations of claim 19. Ans. 7-8. One cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Circ. 1986); *In re Keller*, 642 F.2d 413, 426 (CCPA 1981).

For all these reasons, in addition to those reasons addressing claim 1, we sustain the Examiner's rejection of claims 4, 6, 10-14, 17, 19 and 20 as obvious over the applied prior art.

<u>Obviousness of Claim 22 over Beeson, Gelardi and Kurita</u>

Claim 22 depends from claim 1 and further recites: "a third strip of material . . . a fourth strip of material . . . ; and a fifth strip of material . . .

will vertically compress when drawn through a roller nip and partially vertically decompress when exiting the roller nip in order to engage the optical sensors below the feed path . . . ." The Examiner relied on the combination of Beeson and Gelardi for teaching the claimed invention with the exception of a third, fourth and fifth strip of material. Ans. 9. The Examiner relied on Kurita for teaching a toner removing sheet that comprises a plurality of strips (p) that are located on a substrate (s1). *Id.* The Examiner concluded that it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Beeson and Gelardi so there are at least five strips of material on the substrate as taught by Kurita to ensure better cleaning since more strips means a higher chance of removing all debris from the machine on the first run through. Ans. 9.

In addition to the arguments presented addressing claims 1-4, 6-8, 10-15, and 18-21, the Appellants argue that Gelardi does not teach or suggest strips that would decompress after passing through a roller as claimed. Br. 16. The Appellants' argument is unpersuasive since it attacks the Gelardi reference individually rather than addressing the combined teachings of the references. The Examiner relies on the combination of Beeson, Gelardi and Kurita for teaching the limitations of claim 22. Ans. 9. One cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references. *Merck*, 800 F.2d at 1097; *Keller*, 642 F.2d at 426. Furthermore, as explained above with respect to claim 1, the Appellants do not sufficiently demonstrate that the strips of material as taught by the combination of Beeson, Gelardi and Kurita would be incapable of vertically compressing when drawn through a roller nip and partially vertically decompressing when exiting a roller nip.

For these reasons, in addition to those reasons addressing claim 1, we sustain the Examiner's rejection of claim 22 as obvious over Beeson, Gelardi and Kurita.

Obviousness of Claim 23 over Beeson and Gelardi

Independent claim 23 recites similar limitations to independent claim 1 and further recites: "the first strip of material comprises open cell foam, and the first strip of material comprises lint-free, lead-free, non-abrasive, open cell foam." The Examiner found that Beeson teaches the claim limitations with the exception of teaching that the first strip of material 36 comprises a lint-free, lead-free, non-abrasive, open-cell foam. Ans. 9. The Examiner found that Beeson instead teaches the first strip of material 36 is an absorbent pad which implies open-cell which has antistatic properties with low abrasive characteristics and is lint-free. *Id.* (citing col. 5, ll. 21-24). The Examiner concluded that it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Beeson's first strip of material so that it is completely non-abrasive and lead free as required by the claims since it has been held to be within the general skill of one with ordinary skill in the art to select a known material on the basis of its suitability for its intended use as a matter of obvious engineering choice. Ans. 9-10 (citing *In re Leshin,* 277 F.2d 197 (CCPA 1960).

In addition to arguments already presented with respect to claims 1-4, 6-8, 10-15, and 18-22, the Appellants argue that one with ordinary skill in the art would not look to Gelardi to modify Beeson because Beeson describes print head cleaners that are said to scrub the print heads and thus not wipe sensors clean as the claimed foam would accomplish. Br. 18. Appellants further argue that "the combination would not work for the

intended purpose." *Id.* We are unpersuaded by the Appellants' argument as it not commensurate in scope with the claim, but instead focuses on wiping sensors clean with foam which is not recited in the claims.

The Appellants further argue that since Beeson teaches print head cleaners that are said to "scrub" the print heads, Beeson would appear to teach away from non-abrasive foam. Br. 18. Beeson's teaching of scrubbing dried ink and particulates from the printhead (*see* Beeson col. 6, ll. 30-33 (FF 8)) does not suggest that Beeson's strips would be unlikely to produce the objective sought by the Appellants invention. *See Syntex,* 407 F.3d at 1380. Moreover, Beeson teaches that the solvent pad 34 and the absorbent pad 36 have low abrasive characteristics. Col. 5, ll. 8-11, 21-23 (FFs 3-4).

For these reasons, in addition to those reasons addressing claim 1, we sustain the Examiner's rejection of claim 23 as obvious over Beeson and Gelardi.

DECISON

WE AFFIRM the rejection of claims 1-3, 6-8, 11, 12, 15, 18, 20, 21 and 23 under 35 U.S.C. § 103(a) as unpatentable over Beeson and Gelardi.

WE AFFIRM the rejection of claim 4 under 35 U.S.C. § 103(a) as unpatentable over Beeson, Gelardi and Kikuchi.

WE AFFIRM the rejection of claims 10, 13, 14 and 17 under 35 U.S.C. § 103(a) as unpatentable over Beeson.

WE AFFIRM the rejection of claim 19 under 35 U.S.C. § 103(a) as unpatentable over Beeson, Gelardi and Kalbow.

WE AFFIRM the rejection of claim 22 under 35 U.S.C. § 103(a) as unpatentable over Beeson, Gelardi and Kurita.

TIME PERIOD

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

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