NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

K-SWISS INC.,
Appellant,

v.

GLIDE N LOCK GMBH
(now known as On Clouds GmbH),
Cross Appellant.

2013-1316, -1317

Appeals from the United States Patent and Trademark Office, Patent Trial and Appeal Board in Reexamination No. 95/001,320.

Decided: April 23, 2014

STEVEN P. WEIHROUCH, Rothwell, Figg, Ernst & Manbeck, P.C. of Washington, DC, argued for appellant. With him on the brief were JEFFREY R. FOUGERE and JENNIFER P. NOCK.

HENRY A. PETRI, JR., Novak Druce Connolly Bove + Quigg, LLP, of Washington, DC, argued for cross appellant. With him on the brief were MICHAEL W. O'NEILL and DANIEL P. MULLARKEY.

Before LOURIE, DYK, and WALLACH, *Circuit Judges.*

DYK, *Circuit Judge.*

Appellant K-Swiss Inc. (K-Swiss) appeals from a decision of the Patent Trial and Appeal Board (Board). On Clouds GmbH (formerly Glide'n Lock GmbH) (On Clouds), the patent owner, cross-appeals. With respect to the cross-appeal, we affirm the Board's decision rejecting claims 1, 2, and 8–10 of U.S. Patent No. 7,181,866 (the '866 patent) as anticipated by International Patent Application No. WO 90/00021 (Szentes) and claims 3–5 as anticipated by Japanese Patent Application Publication No. H07-284403 (Okabe). With respect to K-Swiss's appeal, we reverse the Board's decision upholding claims 6, 7, and 11 as nonobvious over Szentes in view of UK Patent Application No. GB 2001843 (Pagani), Japanese Unexamined Utility Model Application No. S49-96158 (Takahashi), and US Patent No. 4,523,393 (Inohara) (respectively). We do not address K-Swiss's alternate arguments for invalidity.

BACKGROUND

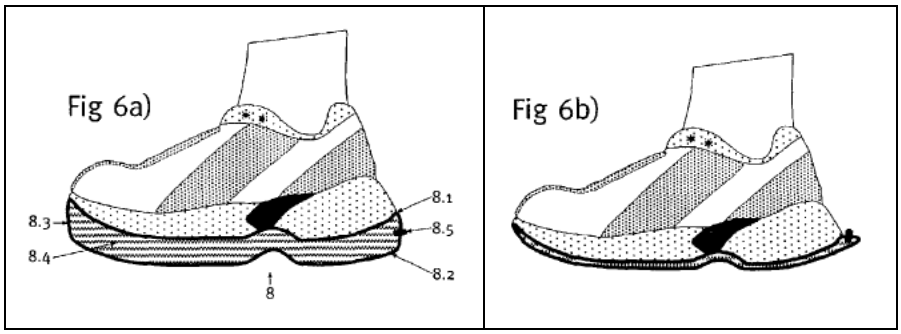
The '866 patent recognizes that air or gel cushions were well known in the prior art to absorb shocks on a runner. However, they suffered from two problems. If such cushions were "relatively rigid in the horizontal or tangential direction," they did "not yield sufficiently if the runner's foot contacts the ground obliquely," and did not absorb shocks from the oblique direction. '866 patent col. 1 ll. 32–35. However, when the prior art *could* absorb shocks in the oblique direction, this deformation could have a destabilizing effect. Therefore, prior art outsoles that were capable of deformation suffered from a "floating effect" that "negatively influence[d] the stability of the runner." '866 patent col. 1 ll. 36–45.

The '866 patent seeks to address these twin problems. The patent is directed at a variation of a shoe outsole with a resilient member that *allows* relative motion between the upper and lower portions in the "unloaded state" to absorb oblique shoe loads, but compresses and engages to *prevent* relative motion in the "loaded state"—*i.e.*, when pressure is applied to the outsole. Representative claim 1 reads as follows:

> 1. An outsole for a shoe, the shoe disposed along a longitudinal axis in a longitudinal direction parallel to a ground surface in use, the outsole comprising:
>
> > a resilient member having an inner surface, an outer surface and, with respect to a direction perpendicular to the longitudinal direction, an upper portion and a lower portion, the outer surface of the lower portion proximate the ground surface in use,
> >
> > the resilient member having first and second configurations, the first configuration [*i.e.*, the unloaded state] having the inner surface of the upper portion spaced from the inner surface of the lower portion, the resilient member elastically absorbs shoe loads oblique to the perpendicular direction by relative motion in the longitudinal direction between the upper portion and the lower portion in the first configuration, the second configuration [*i.e.*, the loaded state] having the inner surface of the upper portion engaged with the inner surface of the lower portion due to absorbed shoe loads, the engagement substantially preventing relative motion in

> the longitudinal direction between the upper portion and the lower portion.

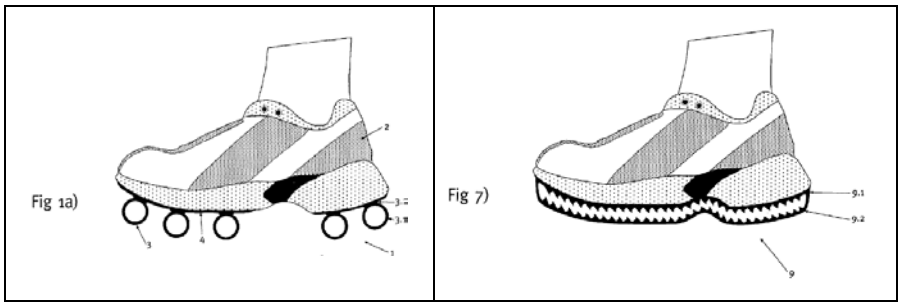
'866 patent col. 6 ll. 2–21. Figures 6a and 6b below show the resilient member of the outsole (8) in the two claimed configurations, the first, unloaded configuration (6a) and the second, loaded configuration (6b). '866 patent Figs. 6a, 6b.



In the second, loaded configuration, the resilient member compresses or collapses such that the upper layer of the resilient member is engaged with the lower layer of the resilient member.

The claims dependent on claim 1 specify a "plurality" of resilient members (claim 3), the type of connection between the resilient members (claims 4–5), the type of engagement between the upper and lower layers (frictional, claim 2; positive, claim 8), the percentages by which the resilient members deform in the loaded state (claims 6–7), and "a resilient member [that] comprises a profile like hollow element that contains a tubular part" (claim 11). Figure 1a of the '866 patent below shows an embodiment with a plurality of resilient members. The figure also shows the "hollow" and "tubular" shape claimed in claim 11. '866 patent Fig. 1a. Figure 7 shows an embodiment with positive engagement (notching or ribbing) between the upper and lower layers, as in claim 8, rather

than the frictional engagement of claim 2 seen in the other figures. '866 patent Fig. 7.



The second independent claim, claim 9, specifies that the type of outsole described in claim 1 would be used with a "member adapted to grasp the foot." '866 patent col. 6 l. 41. Dependent claim 10 specifies that such a member is a shoe.

On March 3, 2010, K-Swiss filed a request for *inter partes* reexamination. In April 2010, finding that K-Swiss's submitted references raised a substantial new question of patentability, the PTO ordered reexamination for claims 1–10 of the '866 patent, and the patent examiner rejected all ten claims. In its response to the April 2010 Office Action, On Clouds added new claim 11, which the examiner rejected.

On appeal, the Board affirmed the examiner's anticipation rejections of claims 1–5 and 8–10. The Board reversed the examiner's rejections of claims 6 and 7 for obviousness. The Board reversed the examiner's rejection of claim 11 for indefiniteness and obviousness.

K-Swiss appeals the Board's decision reversing the examiner's obviousness rejection of claims 6, 7, and 11. On Clouds cross-appeals the Board's decision affirming the examiner's anticipation rejections of claims 1–5 and 8–10. We have jurisdiction under 35 U.S.C. § 141(c) and 28 U.S.C. § 1295(a)(4)(A). We review the Board's legal determinations de novo, and its factual findings for sub-

stantial evidence. *In re Enhanced Sec. Research, LLC*, 739 F.3d 1347, 1351 (Fed. Cir. 2014).

DISCUSSION

I. Anticipation of Claims 1-5 and 8-10

We first address the Board's decision affirming the rejection of claims 1–5 and 8–10 as anticipated by Okabe and Szentes.

> "Determining whether claims are anticipated involves a two-step analysis . . . . The first step involves construction of the claims of the patent at issue, . . . a question of law reviewed *de novo* . . . . The second step of an anticipation analysis involves comparing the claims to the prior art, . . . a question of fact reviewed for substantial evidence."

In re Montgomery, 677 F.3d 1375, 1379 (Fed. Cir. 2012) (internal citations and quotation marks omitted). During examination, claims "are to be given their broadest reasonable interpretation consistent with the specification." *Id.*

We first address the Board's determination that claims 1, 2, and 8–10 are anticipated by Szentes. As with the '866 patent, Szentes describes efforts to cushion runners by creating a "sole . . . made of some elastic material" where "a closed cavity is formed between two elastic materials." J.A. 1730 (Szentes) (p. 2 ll. 29–31); J.A. 1731 (p. 3 ll. 17–19). Szentes implicitly recognizes the "floating" problem as well, indicating that such a hollow cavity has "[t]he drawback . . . in that walking becomes instable." J.A. 1731 (p. 3 ll. 21–31); *see also* J.A. 1733 (p. 5 ll. 19–22) ("Another deficiency lies in, in so far as surficial parts of the two layers facing each other are sliding easily on one another on effect of sliding force components, as a consequence, the person using the

footwear has the sense of uncertainty."). Szentes recommends addressing this problem by having ribbing and notching between the upper and lower layers, which prevents the instability through positive engagement. Figure 2 of Szentes, below, shows the design in the unloaded state. J.A. 1745.

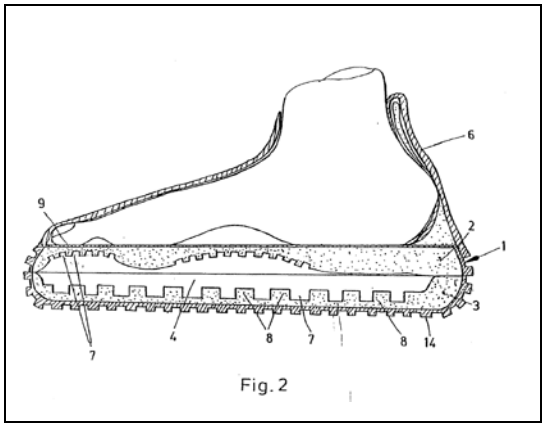


Fig. 2

On Clouds argues that the Board's decision that Szentes anticipates claims 1 and 9 is not supported by substantial evidence because Szentes does not disclose the limitation in the first, unloaded configuration—the resilient member that elastically absorbs oblique shoe loads using the relative motion between the upper and lower layers. We disagree. Because the Szentes sole is made of an elastically resilient material, it absorbs oblique shoe loads in the unloaded state, the first configuration, through the movement of the elastic materials. It is undisputed that the ribbing in Szentes anticipates the second, loaded configuration.

On Clouds also argues that the Board's finding that Szentes describes the "positive engagement" required by claim 8 is not supported by substantial evidence. But even On Clouds concedes that the Szentes text discloses that the ribs fit into notches between the upper and lower layers of the resilient cavity, arguing only that this disclosure is not illustrated in a figure or further described. This objection is not sufficient to show that the Board's findings are not supported by substantial evidence. Szentes also clearly teaches that frictional engagement

would address the instability issue and that the claimed outsole would be used with a shoe, thereby anticipating claims 2 (frictional engagement) and 10 (claimed grasping member of claim 9 is a shoe). In any case, On Clouds does not separately argue the patentability of claims 2 and 10. Therefore, we conclude that the Board's finding that Szentes anticipates claims 1–2 and 8–10 is supported by substantial evidence.

The Board did not rely on Szentes as anticipating claims 3–5, which specify that the outsole may comprise a "plurality" of resilient members, and the type of connection between those members. The Board held that claims 3–5 are anticipated by Okabe.[1] Okabe discloses an improved footwear outsole. Okabe also recognized the "floating" problem created by increased cushioning in shoes in the prior art, describing the "problem to be solved by the invention" as the "inadequate support in the horizontal direction produc[ing] a feeling of instability as if stepping on an air cushion." J.A. 1750 (Okabe) ¶ 0006. Okabe addresses the floating issue by putting rubber pins on the lower layer of the cavity that pressed against the upper layer when the outsole is in a loaded state. Figure 3 of Okabe, below, shows the unloaded state of one of the resilient members described in the claims. J.A. 1752.

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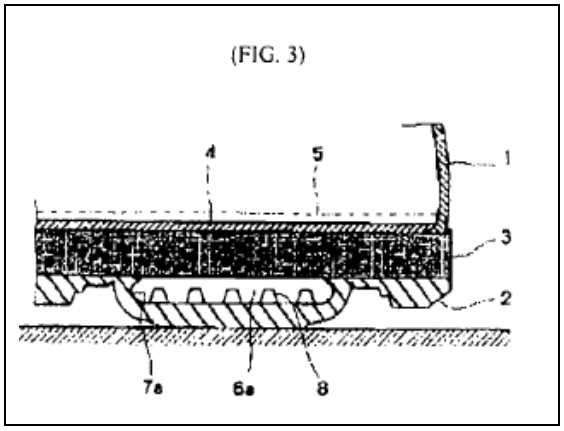
[1] The Board also held that claims 1, 2, 9, and 10 are anticipated by Okabe. Since we hold that the Board did not err in concluding that these claims are anticipated by Szentes, we need not address whether claims 2, 9 and 10 are anticipated by Okabe.



Even though we hold that Szentes anticipates claim 1, in order to determine whether Okabe anticipates dependent claims 3–5, which incorporate the limitations of claim 1, we must first determine whether Okabe also anticipates independent claim 1. On Clouds argues that substantial evidence does not support the Board's conclusion that Okabe anticipates claim 1 because Okabe does not meet the limitation in the second configuration (the loaded state) that the upper and lower layer of the resilient member engage to "substantially prevent" relative motion. On Clouds's contention is incorrect. Okabe teaches that rubber pins would frictionally engage with the upper layer in the loaded state, thereby preventing relative motion between the two layers. J.A. 1751 ¶ 0022 ("[E]ach of the rubber pins [] works together with the air cushion effect, and the characteristic instability experienced with the air cushion effect alone is improved as a result.").

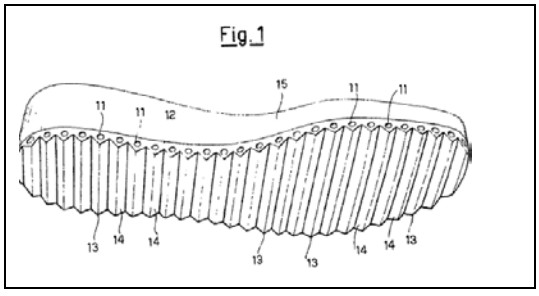
With respect to claim 3, Okabe describes an embodiment with "multiple long and narrow cavities arranged in a row," thereby anticipating the plurality of resilient members. J.A. 1751 ¶ 0022. Regarding claims 4–5, a lower layer extends between the cavities or resilient members, as shown in Figure 1. J.A. 1752. Therefore, the Board's finding that Okabe anticipates claims 3–5 is supported by substantial evidence.

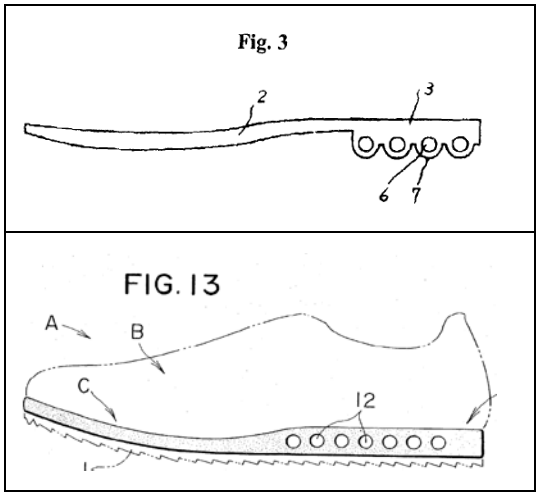
II. Obviousness Rejections of Claims 6, 7, and 11

We next address the Board's decision declining to reject claims 6, 7, and 11 as obvious over Pagani, Takahashi or Inohara in view of Szentes. A determination of obviousness under 35 U.S.C. § 103 is a question of law based on underlying findings of fact. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). The differences between the claimed invention and the prior art as well as what the references actually teach are questions of fact. *Enhanced*, 739 F.3d at 1351.

Claims 6 and 7 depend on claim 2 (which we hold was anticipated), and specify the amount by which the resilient member deforms in the loaded configuration, with claim 6 claiming greater than 20% deformation and claim 7 claiming greater than 50% deformation. '866 patent col. 6 ll. 32–37. Claim 11 describes a variation of the outsole where "the resilient member comprises a profile like hollow element that contains a tubular part." J.A. 461.

We first address the question of whether claim 11 should have been found obvious. Pagani, Takahashi, and Inohara each teach an outsole comprising a plurality of tubular resilient members. Figure 1 of Pagani, figure 3 of Takahashi, and figure 13 of Inohara, below, each show the tubular hollow elements in the outsoles described in those references, respectively. J.A. 1722 (Pagani); J.A. 1720 (Takahashi); J.A. 1713 (Inohara).





Szentes teaches the use of ribbing or notching between the upper and lower layers to provide increased stability. Pagani, Takahashi, or Inohara, when combined with Szentes, would render obvious claim 11. However, the Board held, and On Clouds argues, that a person having ordinary skill in the art would not have combined Szentes with any of these references because Szentes disparaged the use of small channels like those in Pagani, Takahashi and Inohara. We disagree. Szentes does not disparage the use of small channels, but uses them as another example of the floating problem that it was attempting to solve—"[an outsole with multiple small cavities] shows the same deficiencies[] as the previous one [*i.e.*, a large hollow cavity], wearing results in an unsure and wobbling walk." J.A. 1731–32 (Szentes) (p. 3 l. 36 to p. 4 l. 3). Szentes describes a solution to this floating problem in a large cavity. It would be logical to apply Szentes's solution for a large cavity to the small channels of Pagani, Takahashi and Inohara.

The Board also found that to meet the engagement limitation of claim 1, on which claim 11 depends, "there must be contact between the upper and lower layers."

J.A. 488.[2] Correspondingly, the Board found that "channels of Pagani [and presumably also Takahashi and Inohara] would [not] necessarily be compressed to the extent wherein the upper and lower portions are 'engaged.'" J.A. 488. Although we agree with the Board's construction of claim 1, it is not necessary that Pagani alone teach engagement of the upper and lower layers. Szentes teaches engagement to prevent the floating effect. When Pagani is combined with Szentes, given that Pagani describes its resilient members as "especially resiliently yieldable" and "yield[ing] under the wearer's weight," J.A. 1725 (Pagani) ll. 67–75, it would have been obvious to one skilled in the art to create engagement of the ribs or pins in the loaded state to prevent the floating effect. Takahashi and Inohara also teach plural round tubular cavities and that such an arrangement is yieldable.[3] Therefore, we find that substantial evidence does not support the Board's finding that claim 11 would not have been prima facie obvious over Szentes in view of Pagani, Takahashi, or Inohara.

As for claims 6 and 7, which specify the percentage the outsole deforms in the loaded position, the specific percentages are not explicitly disclosed in Pagani, Takahashi or Inohara. Although the Board rejected combining these references with Szentes to find the '866 patent claims obvious, the Board never individually

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[2] Contrary to K-Swiss's argument, we agree with On Clouds that the Board did not find that the claims require the cavities to completely collapse.

[3] *See, e.g.*, J.A. 1719 (Takahashi) (describing "the elasticity of shoe sole material"); J.A. 1714 (Inohara) U.S. Patent No. 4,523,393 col. 2 ll. 40–44 ("[t]he shoe sole C is made of rubbery material in which . . . the interlayer body [*i.e.*, the layer with the tubular cavities] consist[s] of soft rubber, polyurethane, sponge, and the like.").

considered claims 6 and 7. We find claims 6 and 7 invalid for two main reasons. First, the percentages in claims 6 and 7 are inherently disclosed by Pagani, Takahashi, or Inohara.[4] Second, as the patent examiner found, it would have been obvious to one having ordinary skill in the art at the time to construct resilient members that achieve this deformation percentage, since "where the general conditions of a claim are disclosed in the prior art," as here, "it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456 (CCPA 1955); *see generally Randall Mfg. v. Rea*, 733 F.3d 1355, 1362–63 (Fed. Cir. 2013). Therefore, we find that substantial evidence does not support the Board's finding that claims 6 and 7 would not have been prima facie obvious in light of Szentes, Pagani, Takahashi, or Inohara.

Finally, On Clouds contends that in the event we find claims 6, 7, and 11 to have been prima facie obvious, we should remand to the Board to consider On Clouds's

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[4] *See, e.g.*, J.A. 1725 (Pagani) ll. 9–11 ("[A]n article of footwear, which is made from a preferably compressibly resilient polymeric material such as rubber or synthetic plastic[]."); J.A. 856–57 (Frederick Decl.) ¶¶ 89–90 ("Based on my independent evaluation of the structure and material properties described in Pagani and in view of the materials typically available for purposes of shoe construction, it is my opinion that Pagani discloses deformation that would be more than 50% when a wearer undertakes vigorous activity."); J.A. 1718 (Takahashi); J.A. 859–60 (Frederick Decl.) ¶¶ 105–06; J.A. 1714 (Inohara) U.S. Patent No. 4,523,393 col. 2 ll. 40–44 ("[t]he shoe sole C is made of rubbery material in which . . . the interlayer body [*i.e.*, the layer with the tubular cavities] consist[s] of soft rubber, polyurethane, sponge, and the like."); J.A. 862–63 (Frederick Decl.) ¶¶ 119–20.

declarations concerning secondary considerations of nonobviousness. The Board did not reach this issue after deciding that the claims were not obvious. But the declarations did not connect the statements of praise, the only alleged secondary consideration, with the claimed features of the '866 patent. In addition, before the Board, On Clouds argued only that the declarations established secondary considerations with respect to claim 8 and the "positive engagement" limitation. It did not argue that the declarations established secondary considerations with respect to claims 6, 7, and 11. Therefore, these declarations are insufficient to overcome the prima facie case of obviousness.

We conclude that claims 6, 7, and 11 should have been rejected as obvious, and remand to the Board for entry of an appropriate order.

AFFIRMED-IN-PART, REVERSED-IN-PART, AND REMANDED

Costs to K-Swiss.