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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* JASON LEE MIRISOLOFF

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Appeal 2018-000237<sup>1</sup>  
Application 13/215,610  
Technology Center 3700

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Before: LINDA E. HORNER, JAMES P. CALVE, and LEE L. STEPINA,  
*Administrative Patent Judges.*

STEPINA, Administrative Patent Judge.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1–5, 21–24, 26–31, and 33–36. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> The Appeal Brief indicates that Welch Allyn, Inc. is the real party in interest. Appeal Br. 5.

### CLAIMED SUBJECT MATTER

The claims are directed to a system for unassisted blood pressure measurement. Spec. ¶ 1. Claim 1, reproduced below with emphasis added, is illustrative of the claimed subject matter:

1. A blood pressure cuff, comprising:
  - a substantially cylindrical sleeve configured to accept a limb of a patient, the sleeve including
    - a central axis,
    - an inflatable bladder having a first end, and a second end disposed opposite the first end, wherein an inner surface of an exterior of the bladder comprises at least a portion of an exterior surface of the sleeve, and
      - an elastic panel including first and second outermost ends extending substantially parallel to the central axis, the elastic panel being directly connected to a surface of the bladder intermediate the first and second ends of the bladder such that the first and second outermost ends contact the bladder;*
    - and
    - a tail connected to the second end of the bladder, the tail including a longitudinal axis disposed transverse to the central axis of the sleeve.

Appeal Br. 49 (Claims App.).

### REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Schenker	US 3,279,459	Oct. 18, 1966
Hurwitz	US 3,669,096	June 13, 1972
Vivenzio	US 2010/0298725 A1	Nov. 25, 2010

### REJECTIONS

I. Claim 36 is rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

II. Claims 1–5, 21–24, 26–31, and 33–36 are rejected under 35 U.S.C. § 103(a) as unpatentable over Vivenzio and Schenker, alone, or with evidence from Hurwitz.

## OPINION

### *Rejection I, Written Description*

The Examiner finds that the original disclosure does not provide adequate written description for the requirement that “the elastic panel [of claim 1] is made from a first recyclable material and the bladder [of claim 1] is made from a second material different from the first material,” as set forth in dependent claim 36. Final Act. 3 (quoting claim 36). In the Answer, the Examiner explains that “the specification as filed only [uses the term ‘recyclable’] once (paragraph 17), [and] it is unclear how support can be concluded based on this passage or the laundry list of materials in paragraph 28 to show possession of the scope that the elastic panel is a different recyclable material than the material of the bladder structure.” Ans. 3. The Examiner finds that the Specification does not set forth which of the disclosed “laundry lists” of materials is recyclable. *See* Ans. 4.

Appellant contends that support for claim 36 can be found in Figure 2 and in paragraphs 17, 18, 25, 28, and 41 of the Specification. *See* Appeal Br. 16–18. With regard to the requirement that the elastic panel be made from *recyclable* material, Appellant points to paragraph 17. Appeal Br. 16–17.

Although we appreciate the Examiner’s position that the particular combination of an elastic panel made from a recyclable material and a bladder made from another material is not specifically set forth in the Specification, we understand the various lists of materials discussed in

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paragraphs 17, 18, and 28 of the Specification to mean that the elastic panel can be made from any of the materials in its associated list, and the bladder may be made from any of the materials in its associated list. In other words, the Specification provides written description for many different combinations in which the elastic panel and the bladder are made from different materials. As for support for claiming that the material of the elastic panel is both (i) different from the material of the bladder and (ii) *recyclable*, we find that many of the combinations disclosed by the Specification satisfy this requirement. Paragraph 17 of the Specification explains that the bladder and the cover<sup>2</sup> may be made from recyclable materials, and examples of these materials include “paper, cloth, mesh, plastics, and/or polymers such as polypropylene or polyethelene.” Claim 36 does not preclude the bladder from being made from recyclable material. In other words, claim 36 allows for the second material (used to make the bladder) to be recyclable, or not, but requires the first material (used to make the elastic panel) to be a recyclable material. Thus, according to Appellant’s Specification, selecting polyethelene for the material of the elastic panel allows selection of any of at least four other disclosed materials for use in the bladder while satisfying the requirements of claim 36 that the elastic panel and bladder are made from different materials. Accordingly, we agree with Appellant that the original disclosure provides adequate written description for claim 36, and we do not sustain Rejection I.

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<sup>2</sup> Paragraph 28 of the Specification teaches that the elastic panel may be made from any of the materials disclosed for making the cover.

*Rejection II, Obviousness of the Claimed Subject Matter*

*Claim 1*

The Examiner finds that Vivenzio teaches many of the elements required by claim 1, but does not teach an elastic panel directly attached to the bladder, as recited. Final Act. 5. The Examiner relies on the teachings of Schenker or those of Schenker and Hurwitz (regarding the location of the connection) to remedy this deficiency. *Id.* at 5–6 (citing Schenker, 1:29–45, 3:8–19, Figs. 2, 3, 8, 10 and Hurwitz, Figs. 1, 3, 4, 5). The Examiner reasons that adding an elastic panel (as taught by Schenker) to the structure of Vivenzio would be a combination of “prior art elements according to known methods to yield predictable results using an elastic section on a pressure cuff in order for the same cuff to be used on differing sized arms and to allow a patient to more easily measure his or her own blood pressure.” Final Act. 5–6. The Examiner does not find that any of the cited references discloses the particular location of the connection between the elastic panel and bladder, i.e., the elastic panel being directly connected to the bladder intermediate the first and second ends of the bladder, as recited in claim 1. *Id.* at 6. However, the Examiner determines that, in the proposed combination to Vivenzio, the added elastic panel would be directly connected to a surface of the bladder as recited in claim 1. *Id.*

(a)<sup>3</sup>

Appellant does not contest the Examiner’s findings of fact regarding the structure disclosed by Vivenzio, Schenker, and Hurwitz. *See* Appeal Br. 18–27. Instead, Appellant points out that none of the cited references

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<sup>3</sup> Appellant uses headings beginning with letters a–d to identify the arguments made against the rejection of claim 1. *See* Appeal Br. 2 and 19–25. We use the same identifiers.

discloses an elastic panel directly connected to a surface of a bladder. *Id.* at 19. This assertion does not address the Examiner’s rejection, which does not find that any of the references teaches an elastic panel so connected. *See* Final Act. 5–6. Appellant also asserts “there are several reasons why the Vivenzio cuff does not include, and would not be modified to include, such an elastic panel.” *Id.* at 19. We address these contentions below.

(b)

Appellant contends that the cuffs disclosed by Vivenzio “are either made from a single type of material ‘to facilitate recycling by having all components classified under a single recycling code,’ or the cuffs ‘can be treated with an additive that enables the sleeve member to become biodegradable after a predetermined and finite period of time.’” Appeal Br. 20 (quoting Vivenzio ¶¶ 7, 44). In contrast, Appellant asserts, Schenker and Hurwitz “both describe the use of at least two different types of materials to facilitate expansion of the cuffs disclosed therein, and neither of these references provides any indication that at least the stretchable (e.g., elastic) portion of the disclosed cuffs is made from a recyclable or biodegradable material.” Based on the above, Appellant contends that providing either a biodegradable cuff or a recyclable cuff is an express design goal<sup>4</sup> of Vivenzio and modifying the structure disclosed by Vivenzio based on the teachings of Schenker and Hurwitz would undermine this goal. *See id.* at 20–22.

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<sup>4</sup> When discussing whether the proposed modification undermines a design goal in Vivenzio, Appellant refers to MPEP § 2143.01(V), which relates to modifications that render a reference being modified *unsuitable for its intended purpose*. *See* Appeal Br. 21–22; *see also* MPEP § 2143.01(V).

In response, the Examiner finds that Vivenzio teaches using elements other than the cuff itself, such as non-woven fabric, a film, fasteners, adhesives, and clips that are not the same material as the cuff. Ans. 9 (citing Vivenzio ¶¶ 9, 49). The Examiner also finds that Vivenzio teaches attaching a stethoscope pocket that is formed of similar (not identical) material as sheet 154 or bladder sheet 155 of Vivenzio. Ans. 10. Thus, the Examiner finds, Vivenzio teaches “it is preferred that the cuff structures forming the bladder be of the same material, which is a material that promotes recyclability, not that all materials associated with the cuff structures must be the same material as is evident from the usage of fasteners and additional materials.” *Id.*

In reply, Appellant contends that the Examiner improperly focuses on whether Vivenzio prefers (or requires) the use of a single material and does not adequately address Appellant’s contentions regarding biodegradability. Reply Br. 6–7. Appellant reiterates that “[m]odifying the Vivenzio cuff to include the materials described in either Hurwitz or Schenker would not result in an ecologically friendly cuff, and such a combination would be contrary to the express design goals noted in Vivenzio.” *Id.* at 6.

We do not agree with Appellant’s arguments on this point. The Examiner’s finding that Vivenzio discloses the use of adhesives, clips, and hook and loop fasteners is supported by a preponderance of the evidence. *See* Vivenzio ¶¶ 9, 49. Accordingly, we agree with the Examiner’s finding that Vivenzio does not require the entire cuff to be made of a single material. Appellant does not assert that Vivenzio requires these additional components to be biodegradable or recyclable. Consequently, even assuming *arguendo* that the elastic panel added by the Examiner would be a different material from the material of the remainder of the cuff and that the elastic panel

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would not be biodegradable, we do not agree that the addition of the elastic panel would necessarily undermine an express design goal of Vivenzio.

Furthermore, to the extent that the addition of the elastic panel would decrease the recyclability and/or biodegradability of the structure disclosed by Vivenzio, this structure would still be able to perform its intended function as a blood pressure cuff. In other words, the disadvantage argued by Appellant relates to an incremental improvement in blood pressure cuffs (biodegradability or recyclability), it does not relate to the suitability of the structure disclosed by Vivenzio to function as a blood pressure cuff. The disadvantage of the possible loss of this incremental improvement is outweighed by the advantage of the Examiner's proposed modification, specifically, allowing "the same cuff to be used on differing sized arms and to allow a patient to more easily measure his or her own blood pressure." Final Act. 6; *see In re Urbanski*, 809 F.3d 1237, 1244 (Fed. Cir. 2016); *see also Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 n.8 (Fed. Cir. 2000) ("The fact that the motivating benefit comes at the expense of another benefit, however, should not nullify its use as a basis to modify the disclosure of one reference with the teachings of another. Instead, the benefits, both lost and gained, should be weighed against one another.").

(c)

Appellant next contends that the proposed modification would increase the "creep elongation" of the cuffs disclosed by Vivenzio to an unacceptable level. Appeal Br. 23–24; *see also* Vivenzio ¶¶ 5, 49 (discussing measurement accuracy and the allowable limits of creep elongation of laminated fabric).

The Examiner points out that the limits Vivenzio imposes on creep elongation relate to the material of the non-woven *sheet* discussed in

paragraph 49 of Vivenzio, not the entire blood pressure cuff system. Ans.

11. The Examiner also finds that the non-woven sheet need not change as a result of the Examiner's proposed modification to provide an elastic panel in Vivenzio's blood pressure cuff. *Id.*

Appellant contends that the disclosure in paragraph 49 is relevant to the entire cuff system because the non-woven sheet spans the entire length of this system. Reply Br. 7–8.

The Examiner has the better position on this point because the proposed modification to include an elastic panel does not affect the creep elongation of the non-woven *sheet* disclosed by Vivenzio, and, as shown in Figure 7 of Vivenzio, cuff 100 wraps around the arm of a patient in a way that causes cuff 100 to overlap itself. Thus, to the extent the creep elongation discussed in paragraph 49 of Vivenzio relates to the creep elongation of the entire cuff as asserted by Appellant, we are not apprised of any reason the proposed modification would affect this trait. In any event, Vivenzio describes “creep elongation” in terms of elongation occurring over a matter of *minutes*. See Vivenzio ¶ 49. Appellant does not adequately explain how the immediate change in length provided by an elastic panel that accommodates differently sized patients' arms relates to a relatively slow (over a time period of six minutes) creep elongation.

(d)

Appellant next contends, “Vivenzio also notes that the cuffs disclosed therein may include a socket 110 that is configured to mate with a slotted portion 126 of the cuff” and “modifying the cuffs described in Vivenzio to include either the stretchable strip 36 of Schenker or the elastic fabric 8 described in Hurwitz would render at least the slotted portion 126 superfluous.” Appeal Br. 25.

The Examiner finds that slotted portion 126 of Vivenzio and the elastic panel added by the proposed modification have different functions, even if they also have a function in common. Ans. 12–13. Namely, the Examiner finds that the elastic panel enhances the ability of the patient to use the blood pressure cuff without assistance, and the slotted portion 126 allows extension of a port through the tail of the blood pressure cuff. *Id.* at 13.

Echoing the argument presented in section (c), Appellant replies that adding such components to the Vivenzio cuff would increase the elongation characteristics of the Vivenzio cuff beyond the acceptable levels noted in Vivenzio. Reply Br. 9. Appellant also reiterates that adding an elastic panel would render slotted portion 126 of Vivenzio redundant. *Id.*

For the following reasons, we do not agree with any of Appellant’s arguments under heading (d). The Examiner proposes an *improvement* to the blood pressure cuff of Vivenzio, in particular, an enhancement to how a patient dons the cuff without assistance. Appellant does not dispute that the Examiner’s proposed modification would provide this result. Nor does Appellant explain persuasively why the increased variability in sizes of arms accommodated by the modified version of Vivenzio’s blood pressure cuff is contrary to any stated goal in Vivenzio. In this regard, we see no reason as to why, in the Examiner’s proposed modification, Vivenzio’s slot 126 would not continue to function as it does in its original state.

We have considered all of Appellant’s arguments in support of the patentability of claim 1, but find them unavailing. Accordingly, we sustain the rejection of claim 1 as unpatentable over Vivenzio and Schenker (and, alternatively, Schenker and Hurwitz).

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*Claims 2–5, 21–24, 26, 29–31, 33, and 36*

Appellant does not make arguments in support of the patentability of claims 2–5, 21–24, 26, 29–31, 33, and 36 aside from those discussed above regarding claim 1. *See* Appeal Br. 27. Accordingly, claims 2–5, 21–24, 26, 29–31, 33, and 36 fall with claim 1.

*Claims 27, 28, 34, and 35*

In support of the patentability of claims 27, 28, 34, and 35, Appellant reiterates the same arguments discussed above. *See* Appeal Br. 27–46. Accordingly, we sustain the rejection of these claims for the same reasons discussed above.

#### DECISION

I. The rejection of claim 36 as failing to comply with the written description requirement is reversed.

II. The rejection of claims 1–5, 21–24, 26–31, and 33–36 as unpatentable over Vivenzio and Schenker, alone, or with evidence from Hurwitz 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).

AFFIRMED