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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte OLEG SHIKHMAN

Appeal 2015-001109
Application 10/988,996
Technology Center 3700

Before CHARLES N. GREENHUT, MICHAEL L. HOELTER, and
ANNETTE R. REIMERS, *Administrative Patent Judges*.

REIMERS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Oleg Shikhman (Appellant) appeals under 35 U.S.C. § 134(a) from the Examiner's decision to reject under 35 U.S.C. § 103(a): (1) claims 1, 3–10, 12–18, and 22–24 as unpatentable over Sauer (US 5,643,289; iss. July 1, 1997) and Johnson (US 6,045,572; iss. Apr. 4, 2000); and (2) claims 11, 19, and 20 as unpatentable over Sauer, Johnson, and Wozniak (US 4,470,415; iss. Sept. 11, 1984). Claims 2 and 21 have been canceled. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

CLAIMED SUBJECT MATTER

The claimed subject matter relates to “an instrument . . . for closing a hole or puncture in a blood vessel. More particularly, this disclosure relates to an improved ferrule closure for a hole or puncture in a blood vessel.” Spec. ¶ 2, Figs. 1, 3. Claims 1 and 22 are independent. Claim 1 is illustrative of the claimed subject matter and recites:

1. A kit for securing suture material within a body of a patient, the kit comprising:
 - a percutaneous crimping and cutting device; and
 - a biocompatible surgical ferrule loaded into the percutaneous cutting and crimping device, the ferrule having a body portion having a first flared region, wherein said body portion has a first end portion and a second end portion, and wherein the first flared region is provided on the first end portion and wherein an aperture of the body portion is provided between said first end portion and said second end portion and is configured to receive at least one suture strand, and at least a portion of the body portion is deformable to secure the suture strand within the aperture, wherein the first flared region extends gradually outwardly from the longitudinal axis of the body portion at increasing angles past 90 degrees such that it changes direction with regard to the longitudinal axis of the body portion.

ANALYSIS

Obviousness over Sauer and Johnson

Claims 1, 3–10, 12–15, and 22–24

Appellant argues claims 1, 3–10, 12–15, and 22–24 as a group. App. Br. 5–7. We select claim 1 as representative. *See* 37 C.F.R. § 41.37(c)(1)(4). Claims 3–10, 12–15, and 22–24 stand or fall with claim 1. We address claims 16–18 separately below.

The Examiner finds that Sauer discloses all the limitations of claim 1 except for “the ferrule having a first flared region extending gradually outwardly from the longitudinal axis of the body portion at increasing angles past 90 degrees such that it changes direction with regard to the longitudinal axis of the body portion.” Final Act. 2–3. The Examiner further finds that Johnson teaches “a biocompatible surgical ferrule having a first flared region (flange 84 in Figure 9 or 152 in Figures 25–27; col. 11, lines 32–35)” (*Id.* at 3) wherein

[t]he first flared region extends gradually outwardly from the longitudinal axis of the body portion at increasing angles (at least in the inner aperture surfaces of the ferrules of Figures 9 and 25–27 which expand the inner diameter of the body portion) up to about 45 degrees or 90 degrees from the longitudinal axis of the body portion.

Id.

The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of invention “to provide a first flared region to the ferrule of Sauer et al., as taught by Johnson et al., in order to seat the ferrule securely against tissue and prevent movement of the ferrule relative to tissue ([Johnson] col. 8, lines 14–16 and col. 11, lines 45–50).”

Id.; *see also* Ans. 3.

Appellant begins his remarks with a discussion of Johnson and how that reference describes a sternum closure device that utilizes grommets that are placed in holes in the sternum and through which a wire suture is threaded and tensioned to draw the grommets (and thus the sternum) together. App. Br. 6; *see also* Reply. Br. 2. Appellant emphasizes that Johnson does not describe a crimping and cutting device (or kit) and that the Johnson device does not deform the grommets to secure a suture through the

apertures in the grommets. App. Br. 6. Appellant follows his discussion of Johnson with a brief summary of the Sauer reference which, according to Appellant, teaches a crimping and cutting device using a standard ferrule and “not the shaped, crimped ferrule that is presently claimed.” *Id.*

Appellant further contends:

In order for the proposed rejection to be viable, one skilled in the art would need to be motivated to take the grommet of Johnson, which is NOT ever crimped, and which is specific to insertion into the sternum of a patient in an open procedure with tightening of adjacent grommets together via a wire, and instead use that non-crimped sternum grommet in the minimally invasive percutaneous device of Sauer for a completely different reason. Indeed, the Johnson grommet is actually inserted IN a hole in the sternum and could not be crimped in the manner proposed by the Examiner (the tube of the grommet is inserted through bone).

Id. at 6–7.

We are not persuaded by Appellant’s contentions because they misapprehend the Examiner’s rejection and are not responsive to the key aspects of the Examiner’s proposed rejection. As noted by the Examiner in the Answer, Sauer and not Johnson is relied upon for teaching of a percutaneous crimping and cutting device used with a ferrule to secure a suture. Ans. 2. As the Examiner additionally notes: “the basis for the rejection does not involve using the ferrule of Johnson with the percutaneous device of Sauer, but rather modifying the distal region of the ferrule of Sauer with the flared region of the ferrule in Johnson.” *Id.* at 2–3. Further, the Examiner’s findings and conclusions regarding the combined teachings of Sauer and Johnson are reasonable and based on rational underpinnings. *See* Final Act. 2–3; *see also* Ans. 3. Appellant does not apprise us of Examiner error. *See* App. Br. 7.

Appellant further contends that the Examiner engages in impermissible hindsight in combining the references. *See* App. Br. 7. We are not persuaded. The Examiner cites specific teachings in the references themselves, not Appellant's disclosure, in support of the Examiner's articulated reasoning for combining the references as proposed in the rejection. *See* Final Act. 2–3; *see also* Ans. 3.

Accordingly, for the foregoing reasons, we sustain the Examiner's rejection of claim 1 as unpatentable over Sauer and Johnson. We further sustain the Examiner's rejection of claims 3–10, 12–15, and 22–24, which fall with claim 1.

Claims 16–18

In the remarks concerning claims 11, 19, and 20, Appellant also mentions claims 16–18, which were not included in the rejection of claims 11, 19, and 20 based on Sauer, Johnson, and Wozniak but, rather, were discussed in the rejection of 1, 3–10, 12–18, and 22–24 based on Sauer and Johnson. *See* Appeal Br. 7–8; *see also* Final Act. 2–5. Regarding claims 16 and 17, the Examiner relies on Sauer, not Wozniak, for teaching of a surgical ferrule fabricated from deformable biocompatible/bioabsorbable material. Final Act. 2 (citing Sauer at col. 6:19–26); *see also* Ans. 3. Even though the Examiner relies on Sauer for teaching a surgical ferrule made of biocompatible/bioabsorbable material, we have not been apprised of error as to why the ferrule cover cannot be made of the same material. Regarding claim 18, as correctly noted by the Examiner, non-bioabsorbable but biocompatible materials such as expanded polytetrafluoroethylene or Teflon materials also can be used to make the ferrule cover

since it was known in the art that non-bioabsorbable materials are biocompatible materials commonly used in surgical devices, as well as Teflon material has low friction and non-reactivity and since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use.¹

Final Act. 4–5; *see also* Ans. 3–4. Appellant does not apprise us of Examiner error.

Accordingly, for the foregoing reasons, we sustain the Examiner’s rejection of claims 16–18 as unpatentable over Sauer and Johnson.

*Obviousness over Sauer, Johnson, and Wozniak
Claims 11, 19, and 20*

As for claims 11, 19, and 20, the Examiner finds that Wozniak “teaches a cover material 22 being compliant such that it will at least conform around adjacent material, and is secured to the body portion by . . . shrinking . . . in order to form a tight leak-proof bond (col. 8, lines 15-40).” Final Act. 5. The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of invention “to have the cover material be compliant and be secured to the body portion, as taught by Wozniak, to Sauer et al. and Johnson et al. in order to form a tight bond between the two members 151 and 152 of Johnson et al., for instance.” *Id.*

¹ *See In re Leshin*, 277 F.2d 197, 199 (CCPA 1960); *In re Hopkins*, 342 F.2d 1010, 1015 (CCPA 1965); *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007) (“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”).

Similar to the argument raised against Johnson, Appellant argues that Wozniak is “not a suture securing, deformable ferrule. There is no bore for receiving suture, and the bore is certainly not crimped or otherwise deformed over the suture.” App. Br. 7. Appellant continues “[t]he Examiner simply uses Wozniak because a form of cover is used (in this case, a shrinkable sleeve) over [an] anastomosis device, but this does not make up at all for the noted deficiencies of Gardiner.”² *Id.*

Appellant’s arguments are unpersuasive in that they do not apprise us of error in the Examiner’s findings or reasoning. For example, Appellant does not inform us why it would be improper to provide the modified ferrule of Sauer with a compliant cover completely covering the flared region.

Accordingly, for the foregoing reasons, we sustain the Examiner’s rejection of claims 11, 19, and 20 as unpatentable over Sauer, Johnson, and Wozniak.

DECISION

We AFFIRM the decision of the Examiner to reject claims 1, 3–20, and 22–24.

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

² “Gardiner” is not a cited reference and we consider reference to Gardiner to be a typographical error. It is unclear to which cited patent(s), Sauer and/or Johnson, Appellant is referring by reference to “Gardiner.” However, we will construe the reference to “Gardiner” to mean the combination of the Sauer and Johnson references set forth by the Examiner.