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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte BRIAN J. HANSON and STEVEN KOCH

Appeal 2019-006373
Application 15/175,774
Technology Center 1700

Before CATHERINE Q. TIMM, GEORGE C. BEST, and
CHRISTOPHER C. KENNEDY, *Administrative Patent Judges*.

TIMM, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1–15. *See* Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the term “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Boston Scientific Scimed, Inc. Appeal Br. 3.

CLAIMED SUBJECT MATTER

The claims are directed to a method of manufacturing a medical device such as guidewire to be disposed in a blood vessel. Spec. 5; Fig. 1 (guidewire 10). The method includes steps of laser cutting to remove a portion of a thickness of the wall of a tubular member at one or more discrete locations (claim 1) or to form one or more cavities (claim 11) and chemically etching the one or more discrete locations (claim 1) or at the one or more cavities (claim 11), to form a slot. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A method of manufacturing a medical device, the method comprising:

laser cutting a tubular member, the tubular member having an inner surface, an outer surface and a tubular wall defining a thickness extending therebetween, wherein laser cutting the member includes removing only a portion of the thickness of the tubular wall at one or more discrete locations along the tubular member; and

chemically etching the one or more discrete locations to form a slot within the tubular wall at the one or more discrete locations along the tubular member.

Appeal Br. 8 (Claims Appendix).

REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Merdan	US 2010/0063479 A1	Mar. 11, 2010
Palmaz	US 2012/0282391 A1	Nov. 8, 2012

REJECTIONS

Claims 1, 3–11, and 13–15 are rejected under 35 U.S.C. § 102(a)(1) as being anticipated by Merdan. Final Act. 3.

Claims 2 and 12 are rejected under 35 U.S.C. § 103 as being unpatentable over Merdan in view of Palmaz. Final Act. 5.

OPINION

Two issues arise from Appellant’s arguments, each of which applies to all the rejected claims.² Appeal Br. 4–7. We select claim 1 as representative for resolving the issues on appeal.

The first issue concerns the Examiner’s interpretation of Merdan’s Figure 3A as depicting cuts that *extend only part way through* the tubular member of that reference. Final Act. 3. The issue is whether Appellant has identified a reversible error in that finding as it relates to the limitation in claim 1 requiring laser cutting to remove “only a portion of the thickness of the tubular wall.” Appeal Br. 4.

The second issue is whether the Examiner reversibly erred by combining Merdan’s disclosures in a manner that does not support a finding of anticipation. Appeal Br. 5–6. Ultimately, the question is whether Merdan “describes” the method of claim 1 within the meaning of 35 U.S.C. § 102(a)(1).

² The Examiner adds Palmaz to support the obviousness of the additional limitation of dependent claims 2 and 12. Final Act. 5. Appellant adds no arguments directed to the Examiner’s findings regarding Palmaz or the conclusion of obviousness. Appeal Br. 7. Thus, no separate argument is raised for the obviousness rejection.

For the reasons that follow, we determine that Appellant has not identified a reversible error in the Examiner's finding of anticipation on either basis.

“‘[A]nticipation,’ [is] a term of art meaning ‘the disclosure in the prior art of a thing substantially identical with the claimed invention.’” *In re Schaumann*, 572 F.2d 312, 317 (CCPA 1978) (quoting 1 A. Deller, *Deller's Walker on Patents* § 75 at 237 (2d ed. 1964)). To anticipate “[a] single reference must describe the claimed invention with sufficient precision and detail to establish that the subject matter existed in the prior art.” *Verve, LLC v. Crane Cams, Inc.*, 311 F.3d 1116, 1120 (Fed. Cir. 2002). Or, put another way, “the reference must describe the applicant's claimed invention sufficiently to have placed a person of ordinary skill in the field of the invention in possession of it.” *In re Spada*, 911 F.2d 705, 708 (Fed. Cir. 1990). “[A] reference can anticipate a claim even if it “d[oes] not expressly spell out” all the limitations arranged or combined as in the claim, if a person of skill in the art, reading the reference, would ‘at once envisage’ the claimed arrangement or combination. *Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376, 1381 (Fed. Cir. 2015) (quoting *In re Petering*, 301 F.2d 676, 681 (1962)). The key question is: What would the reference have described to one of ordinary skill in the art at the time of the invention?

With the above caselaw in mind, we turn to the issues.

Issue 1

To address the first issue, we must consider how the ordinary artisan would have interpreted Merdan's Figure 3A at the time of the invention: Would such a person have understood it to describe cuts that extend only part way through the wall of tubular member? The Examiner finds that it

does. Appellant contends that “[w]hile Figure 3A may appear to show slots extending only part way through the wall, in reality Figure 3A is a side view of the tubular member and depicts the slots extending about the tube” and “[t]he depth of the cut into the tube is not represented in this view.” Appeal Br. 4. According to Appellant, “if Figure 3A was presented in a perspective view, for example, Figure 3A would show that each of the slots extends fully through the wall of the tubular member.” *Id.*

We disagree with Appellant. We determine that Figure 3A depicts the depth of cut at some discrete locations that are visible from the side and conveys that Merdan’s laser cutting step cuts remove only a portion of the thickness of the tubular wall at those discrete locations as required by claim 1. We reproduce Figure 3A below, annotated with a gray arrow:

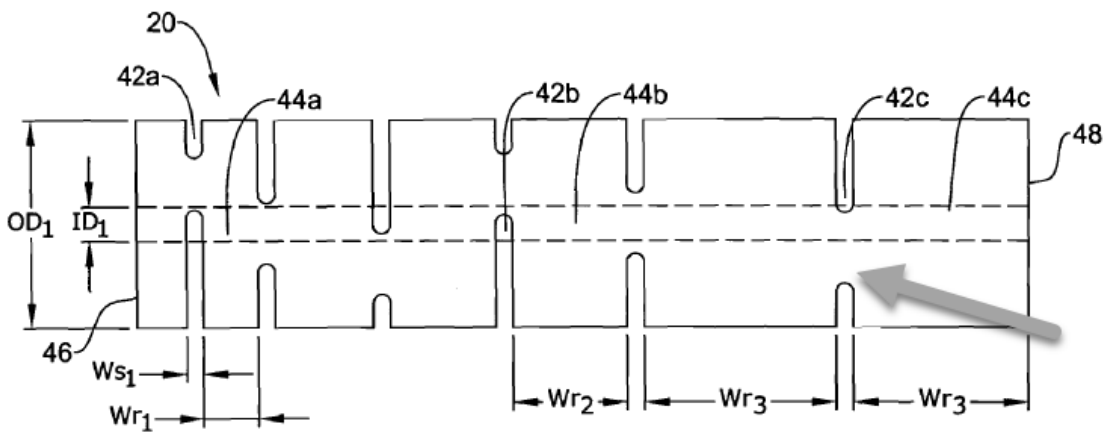


Figure 3A is a side view of tubular member 20 before the step of chemical etching, i.e., after the laser cutting step. Merdan ¶¶ 14, 36–42. As shown in Figure 3A, tubular member 20 includes slots 42a, 42b, and 42c. Merdan ¶ 45. Because the view is a side view, the hollow interior of tubular member 20 is shown in phantom. Merdan ¶ 43; Fig. 3A (broken lines through the center depicting a hollow interior with diameter ID1).

We agree with Appellant that the side view of Figure 3A depicts the slots as extending about the tube, but we do not agree that a perspective view would show that each of the slots extends fully through the wall of tubular member 20. The side view of Figure 3A conveys the extent of the slots at the top and bottom of the tubular member and further conveys that at those locations some of the slots fail to extend to the hollow interior, such as at the portion of slot 42c annotated with the gray arrow. The portions of the slots that do not extend fully to the hollow interior are portions where laser cutting only removes “a portion of the thickness of the tubular wall at one or more discrete locations along the tubular member” as required by claim 1. Claim 1 does not exclude laser cutting fully through the wall at other locations.

Appellant has not persuaded us that the Examiner reversibly erred in finding that Merdan’s Figure 3A would have described to the ordinary artisan performing laser cutting so it removes “only a portion of the thickness of the tubular wall at one or more discrete locations along the tubular member” as required by claim 1.

Issue 2

Appellant contends that the Examiner erred in combining “several singular teachings of Merdan to achieve the limitations of independent claims 1 and 11.” Appeal Br. 5.

To the contrary, we find that a preponderance of the evidence supports the Examiner’s finding of anticipation.

There is no dispute that Merdan describes a method of manufacturing a medical device that includes a tubular member. *Compare* Appeal Br. 4–6, *with* Final Act. 3. And, as pointed out by Appellant, “Merdan appears to

laser cut slots in a tubular member at one or more locations and utilize a chemical etching process to vary the inner diameter, the outer diameter and/or the slots widths of the tubular member along its overall length.”

Appeal Br. 6. Appellant contends that this process does not remove “only a portion of the thickness of the tubular wall at a discrete location and chemically [etch] the discrete location to form a slot within the tubular member wall at the discrete location.” *Id.*

We have addressed the first prong of this argument above. A preponderance of the evidence supports the Examiner’s finding that Figure 3A depicts a step of laser cutting tubular member 20 to remove only a portion of the thickness of the tubular wall at one or more discrete locations along the tubular member.

As to the limitation “chemically etching the one or more discrete locations to form a slot within the tubular wall at the one or more discrete locations along the tubular member” further recited in claim 1, Merdan’s Figure 3B illustrates the change in structure due to chemical etching. Figure 3B, annotated with a gray arrow, is reproduced below to show the discrete location we annotated in Figure 3A:

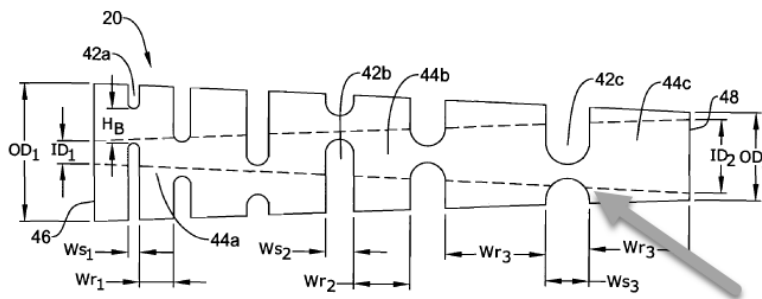


Figure 3B is a side view of tubular member 20 after chemical etching. Merdan ¶¶ 15, 42. Comparing Figure 3B to Figure 3A above, it is apparent that discrete portions where laser cutting did not completely penetrate the

wall are penetrated by chemical etching to form slots, such as at the gray arrow. This is due to the increase in the inner diameter of the distal end of the hollow interior and the widening of various portions of the slots at the discrete locations caused by chemical etching. Merdan Fig. 3B; *see also* ¶¶ 43, 45. Thus, Merdan's Figure 3B, in conjunction with the description of the chemical etching step used to produce the structure shown in Figure 3B, placed a person of ordinary skill in the field of the invention in possession of the chemical etching step of claim 1.

Further, we determine that the descriptions of laser cutting, chemical etching, and the structures that result are sufficiently specific and related to each other such that they support a finding of anticipation. Merdan summarizes an example method for manufacturing the medical device as including steps of providing a tubular member, laser cutting a plurality of slots in the tubular member, and chemically etching at least a portion of the tubular member to remove material from the tubular member. Merdan ¶ 4. In Figures 3A and 3B, Merdan shows tubular member 20 before (Fig. 3A) and after (Fig. 3B) the chemical etching step. Merdan ¶ 42. Merdan's disclosure along with the figures placed the ordinary artisan in possession of laser cutting discrete locations and then chemically etching those locations in a way that meets the requirements of claim 1.

CONCLUSION

The Examiner's decision to reject claims 1–15 is AFFIRMED.

DECISION SUMMARY

Claim(s) Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 3–11, 13–15	102(a)(1)	Merdan	1, 3–11, 13–15	
2, 12	103	Merdan, Palmaz	2, 12	
Overall Outcome			1–15	

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED