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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/932,433	11/04/2015	Frank SCARPINE	356258US01	1776
137574	7590	07/02/2020	EXAMINER	
Medtronic			LABRANCHE, BROOKE N	
826 Coal Creek Circle			ART UNIT	PAPER NUMBER
Louisville, CO 80027			3771	
			NOTIFICATION DATE	DELIVERY MODE
			07/02/2020	ELECTRONIC

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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* FRANK SCARPINE, RICK WILLIAMS,  
FRANCIS BERNARD, and MARIA DE JESUS SANSON

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Appeal 2020-000376  
Application 14/932,433  
Technology Center 3700

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Before BENJAMIN D. M. WOOD, BRANDON J. WARNER, and  
LISA M. GUIJT, *Administrative Patent Judges*.

GUIJT, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant<sup>1</sup> seeks our review under 35 U.S.C. § 134(a) of the rejection of claims 1–14 and 24–26.<sup>2</sup> We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies Medtronic plc as the real party in interest. Appeal Br. 3.

<sup>2</sup> There are no standing rejections for claims 12 and 15–17, which depend ultimately from independent claim 8, in view of the Examiner’s withdrawal of the rejection of claims 12 and 15–17 under 35 U.S.C. § 102(a)(1) as anticipated by Milner. Ans. 8.

## THE INVENTION

Appellant's invention relates to "Clot Removal by Adhesion." Spec., Title. Claims 1 and 8 are the independent claims on appeal. Claim 1, reproduced below with emphasis added, is illustrative of the subject matter on appeal.

1. A method for removing thrombus from a blood vessel, the method comprising:

positioning a distal segment of an aspiration catheter in a blood vessel, a distal end of the aspiration catheter being closed, the distal segment comprising *a unitary, tubular sidewall* having an array of ports extending through the sidewall, the ports of the array positioned along a longitudinal length of the distal segment and about a circumference of the distal segment,

positioning the distal segment in contact with a thrombus in the blood vessel, wherein the array of ports is in fluid communication with a space exterior to the aspiration catheter during the positioning;

applying aspiration through the array of ports while the distal segment is in contact with the thrombus; and

withdrawing the aspiration catheter from the blood vessel with the thrombus at least partially on an exterior of the distal segment.

### THE REJECTIONS<sup>3</sup>

The Examiner relies upon the following as evidence in support of the rejections:

NAME	REFERENCE	DATE
Hart	US 6,254,571 B1	July 3, 2001
Hayase	US 7,449,010 B1	Nov. 11, 2008
Morsi	US 7,914,549 B2	Mar. 29, 2011
Milner	US 2015/0133973 A1	May 14, 2015

The following rejections are before us for review:

- I. Claims 1–5, 7–11, 13, 14, 24, and 26 stand rejected under 35 U.S.C. § 102(a)(1) as anticipated by Hart.
- II. Claim 6 stands rejected under 35 U.S.C. § 103 as unpatentable over Hart and Morsi.
- III. Claim 25<sup>4</sup> stands rejected under 35 U.S.C. § 103 as unpatentable over Hart.

### OPINION

#### *Rejection I*

Regarding independent claim 1, the Examiner finds that Hart discloses, *inter alia*, a method of positioning a distal segment having a

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<sup>3</sup> The Examiner's rejections of claims 8, 10, and 13–17 under 35 U.S.C. § 102(a)(1) as anticipated by Milner, and of claim 12 under 35 U.S.C. § 103 as unpatentable over Milner and Hayase, have been withdrawn. Ans. 8; Final Act. 5–7, 9.

<sup>4</sup> We consider the Examiner's reference to claim 24 in Rejection IV to be a typographical error as the Examiner's rejection addresses the subject matter of claim 25. See Final Act. 9–10; Appeal Br. 15 (Claims App.).

*unitary*, tubular *sidewall*, as claimed. Final Act. 2. In particular, the Examiner finds that Hart’s segmented distal portion 14 is “a unitary body, because it is assembled into one connected element” (*id.* at 2–3), as Hart’s expandable and non-expandable segments 17, 18 are “fused together and comprise the same wall 49.” Ans. 8 (citing Hart 5:63–6:7, Figs. 2A, 2B). The Examiner also finds that apertures 17a in expandable segments 17 of segmented distal portion 14 are ports, as claimed. Final Act. 2–3; *see also* Ans. 8 (“the array of port[s] 17a extend through the sidewall” (citing Hart 4:36–43)).

Regarding the meaning of the claim term “unitary,” the Examiner finds that the Specification “provides no special definition of the term ‘unitary,’” and thus, the Examiner refers to the “plain meaning” of the claim term “unitary” as “‘having the characteristic of a single thing that is a constituent of a whole’ and/or ‘forming a single unit.’” Ans. 8 (citing “Merriam-Webster”). Based on this interpretation, the Examiner finds that, “[r]egardless of the material of element 17 compris[ing] a plurality of wires, once woven or braided into a singular material sidewall, [the wires] become a unitary structure,” wherein “[e]ach element of the distal segment 14 is mechanically connected and indivisible, . . . thereby forming a tubular, unitary sidewall.” *Id.*

Appellant argues that “Hart’s distal portion 14 is not unitary,” as claimed. Appeal Br. 6. In support, Appellant submits that “[a]s is well known in the field of medical devices, an expandable element formed of a ‘woven, braided, or meshed’ material is formed of a plurality of wires that have been woven, braided, or meshed together,” and that “Hart depicts such a structure in Figures 1A and 1B.” *Id.* at 7 (citing “Google’s online

dictionary,” which “defines ‘mesh’ as ‘material made of a network of wire or thread’”). Appellant submits that a person of ordinary skill in the art “would not interpret the sidewall of Appellant’s distal segment to cover braided filaments.” Reply Br. 2.

Appellant also acknowledges that “a dictionary definition of ‘unitary’ may be considered,” however, Appellant submits that the dictionary definition is “still limited by the bounds of Appellant’s specification” and states that the figures, which are a part of the Specification, “do not contemplate a sidewall formed of a plurality of wires.” Reply Br. 2. Appellant argues that Figures 1A and 1C of the Specification “clearly show the claimed unitary, tubular sidewall,” and that “any construction of ‘unitary’ to cover braided filaments (as in Hart) is inconsistent with the present specification and thus improper.” *Id.*

Similarly, Appellant argues that “Hart does not disclose the claim 1 feature of ‘ports extending through the sidewall,’ as . . . Hart does not disclose . . . a distal segment including ‘a tubular, *unitary* sidewall having an array of ports extending through the sidewall,” as claimed. Appeal Br. 6 (emphasis added).

During examination of a patent application, pending claims are given their broadest reasonable construction consistent with the specification. *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Under the broadest reasonable interpretation standard, claim terms are given their ordinary and customary meaning as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Claim 1 requires *a distal segment* of an aspiration *catheter* to have a *unitary* sidewall, wherein an array of ports extend through the sidewall. The claim term “unitary” does not appear in the Specification, nor does Appellant propose a definition for the claim term “unitary.” See Appeal Br. 6–7; Reply Br. 1–2. The Specification also does not use the claim term “sidewall,” but refers to a “distal segment” (*e.g.*, Spec. ¶ 3) having a “tubular body” (*e.g.*, *id.*, claim 13). The Specification discloses, with reference to Figures 1A to 1D, that “distal segment 104 can comprise a tubular body having the array of ports 106 arranged around the circumference of the distal segment 104” (*id.* ¶ 27), and Figures 1A to 1D depict ports 106 extending through the circumferential sidewall of distal segment 104. Spec. ¶ 20. The Specification does not disclose that a sidewall formed of a solid, single piece is required, or that a sidewall formed of wires, as in Hart, would not be encompassed by the invention. Although Figures 1A to 1D depict a sidewall that appears to be a solid, single piece of material, Figures 1A to 1D “illustrate *an example* of a catheter 100 according to *some* aspects of the subject technology.” Spec. ¶ 19 (emphasis added). Further, Appellant’s definition of the term “mesh” fails to inform us as to why the Examiner’s dictionary definition of “unitary” would be overly broad.

In the absence of an express definition of the claim term “unitary” in the Specification, we adopt the Examiner’s dictionary definition *supra*, or plain meaning, namely, “forming a single unit.” Moreover, we find that this definition is consistent with the Specification, which does not exclude a tubular member being made of woven, braided, or meshed material. *Cf.* Spec. ¶ 12 (“[t]he detailed description is . . . intended as a description of various configuration of the subject technology and is not intended to

represent the only configurations in which the subject technology may be practiced,” wherein “[t]he appended drawings are incorporated herein and constitute a part of the detailed description,” and also wherein “it will be clear and apparent to those skilled in the art that the subject technology is not limited to the specific details set forth [in the Specification]”).

We also find that the sidewall of Hart’s woven, braided, or meshed material tubular member is *unitary*, because the woven, braided, or meshed fibers form a single unit, namely, the sidewall of the tubular member. In other words, we decline to import into claim 1 particular structure depicted in Figures 1A to 1D of the Specification (e.g., a solid sidewall), which is beyond the plain meaning of the claim term “unitary,” as a requirement of the claimed sidewall. Nor are we persuaded by Appellant’s argument that the Examiner erred in finding that the apertures in Hart’s woven, braided, or meshed material are an array of ports extending through the sidewall of the tubular member, as claimed. Rather, we agree with the Examiner’s findings *supra* that claim 1 reads on Hart’s catheter.

Accordingly, we sustain the Examiner’s rejection of independent claim 1. Appellant chose not to present arguments for the patentability of independent claim 8 and dependent claims 2–5, 7, 9–11, 13, 14, 25, and 26, apart from the arguments presented for claim 1 *supra*. Appeal Br. 8. Thus, for essentially the same reasons as discussed *supra*, we sustain the Examiner’s rejection of claims 2–5, 7–11, 13, 14, 25, and 26.

### *Rejections II and III*

Appellant chose not to present arguments for the patentability of claims 6 and 25 apart from the arguments presented for claim 1 *supra*.



Appeal 2020-000376  
Application 14/932,433

Appeal Br. 10. Thus, for essentially the same reasons as discussed *supra*, we sustain the Examiner's rejection of claims 6, 12, and 25.

### CONCLUSION

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)</b>	<b>Affirmed</b>	<b>Reversed</b>
1-5, 7-11, 13, 14, 24, 26	102(a)(1)	Hart	1-5, 7-11, 13, 14, 24, 26	
6	103	Hart, Morsi	6	
25	103	Hart	25	
<b>Overall Outcome</b>			1-17, 24-26	

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