

## United States Court of Appeals for the Federal Circuit

00-1205, -1214

MEDTRONIC, INC.,

Plaintiff-Appellant,

v.

ADVANCED CARDIOVASCULAR SYSTEMS, INC.,  
and GUIDANT CORPORATION,

Defendants-Cross Appellants.

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Richard A. Bardin, Fulwider Patton Lee & Utecht, LLP, of Los Angeles, California, argued for defendants-cross appellants. On the brief were John S. Nagy, John K. Fitzgerald, and James Juo. Of counsel on the brief were Aldo A. Badini, and Henry J. Ricardo, Dewey Ballentine LLP, of New York, New York.

Appealed from: United States District Court for the District of Minnesota

Judge James M. Rosenbaum

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DECIDED: April 20, 2001

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Before MICHEL, LINN, and DYK, Circuit Judges.LINN, Circuit Judge.

Medtronic, Inc. (“Medtronic”) seeks review of a final decision of the District Court for the District of Minnesota. Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc., No. 97-CV-2459 (JMR/FLN) (D. Minn. Jan. 12, 2000). The district court granted a motion by Advanced Cardiovascular Systems, Inc. and Guidant Corp. (collectively, “Defendants”) for judgment as a matter of law, filed after trial but before the case reached the jury. The district court held that claims 1-2, 6, 8-9, 11-12, 15, 17, and 19-20 of U.S. Patent No. 5,653,727 (“’727 patent”) were not infringed by Defendants’ accused product. Because the district court correctly construed the means-plus-function limitation of “means for connecting adjacent elements together,” and because Medtronic conceded non-infringement based on that construction, we affirm.

## BACKGROUND

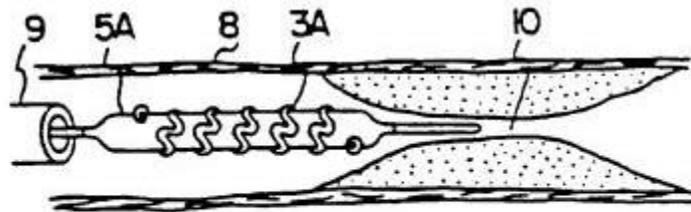
## A. The ’727 Patent

This case concerns the technology involved in intravascular coronary stents. These devices hold open heart blood vessels which have been obstructed. As explained in the ’727 patent, a stent is introduced into a blood vessel, expanded, and left in place. Medtronic is the assignee of a series

of patents and patent applications that deal with this technology. The '727 patent is the last in a series of three applications, and resulting patents, that are relevant to the present suit. The lineage is as follows: (1) The first patent is U.S. Patent No. 4,886,062 ("062 patent"), which issued in 1989. The application that resulted in the '062 patent will be referred to, for simplicity, as the '062 application. (2) The second patent stems from a continuation-in-part ("CIP") of the '062 application, the CIP issuing in 1992 as U.S. Patent No. 5,133,732 ("732 patent"). The CIP application will be referred to, for simplicity, as the '732 application. (3) The third patent stems from a continuation of the '732 application, the continuation issuing in 1997 as the '727 patent. The continuation application will be referred to, for simplicity, as the '727 application.<sup>[1]</sup> Each of these applications will now be addressed in more detail.

The '062 patent discloses a helically wound continuous-wire stent, as shown in Figure 3, reproduced below. Figure 3 also appears in the '727 patent.

As seen in the above figure, the stent (9) is a single continuous wire wound around a cylindrical balloon (8) and contains a series of zig-zags (5A) and is placed over an expandable balloon and introduced into a blood vessel (10) with a partial occlusion (10). The wound stent is



**FIG. 3**

placed over an expandable balloon and introduced into a blood vessel (10) with a partial occlusion (10). When the stent is placed at the point of the occlusion, the balloon is inflated. The inflation of the balloon causes the stent to expand into the walls of the occlusion and/or the vessel. The balloon is deflated and the stent, being made of low-memory metal, remains in place in the expanded condition as the balloon is removed. The expanded metal stent holds the blood vessel open, increasing the vessel's blood carrying capacity.

Coronary arteries are not long, and when stent overstretch occurs, it can have adverse patient implications. Stent overstretch occurs when the coils of a helical stent are inadvertently stretched

lengthwise (longitudinally). The '732 application, the CIP of the '062 application, discussed for the first time the problem of longitudinal overstretch in long stents and disclosed three solutions designed to minimize that overstretch. The disclosed solutions for minimizing longitudinal overstretch are: (1) using a wire bar (referred to hereinafter as a "straight wire"), spot-welded in a lengthwise fashion to successive windings of the stent coil; (2) extending a number of the zig-zag elements of the stent and using them to "hook" between successive windings of the coil; and (3) using sutures to tie adjacent windings together. The '727 patent also contains this disclosure regarding longitudinal overstretch. '727 patent, col. 3, l. 60 – col. 4, l. 11.

The new matter added in the '732 patent to describe the overstretch solutions is illustrated in Figures 7 and 8, reproduced below.<sup>[2]</sup> This subject matter also appears in the '727 patent.

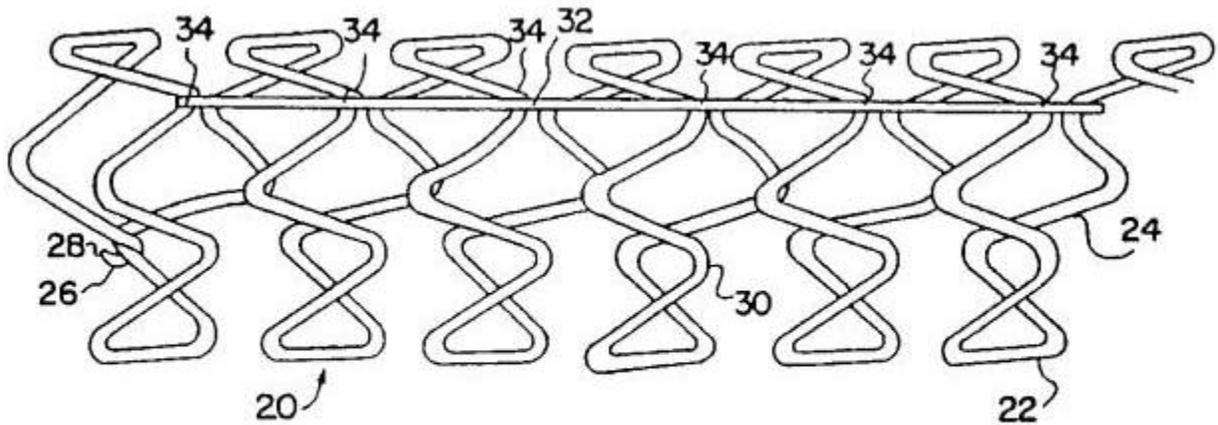


FIG. 7

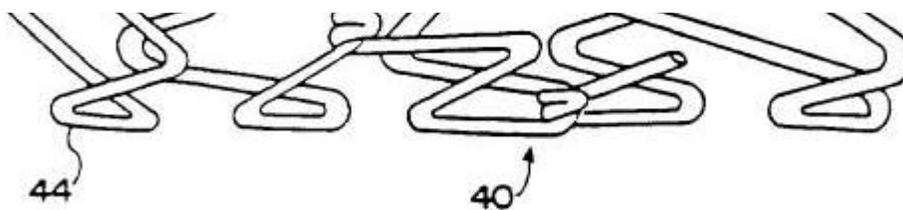


FIG. 8

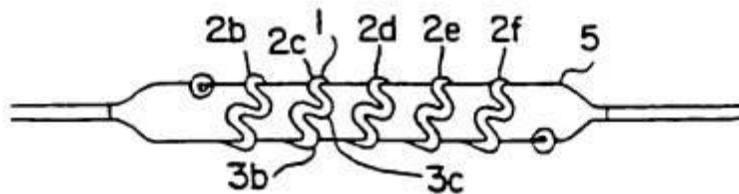
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In summary, the '732 patent, as with the '062 patent, discloses a helically wound continuous-wire stent. In the context of long stents, the '732 patent also discloses the use of three techniques

exclusively designed for minimizing longitudinal overstretch of the helically wound continuous-wire stent.

Almost three and a half years after the '732 patent issued, the patentee filed a preliminary amendment along with the '727 application, adding some text to the written description and inserting additional numerical references in Figures 2, 4, and 5. These additions, which the patentee asserted were not new matter, attempted to change the conceptual description of the invention from that set forth in the '732 application. The helically wound continuous-wire stent of the disclosed embodiments was now described as containing a series of successive individual elements. '727 patent, col. 3, l. 60 – col. 4, l. 11, Abstract, Figures 2, 4, and 5. As shown in Figure 2 of the '727 patent, reproduced below, these newly identified elements (2b-2f) are, in fact, simply the successive 360 degree windings of the continuous-wire stent. The '727 patent does not disclose that the “elements” ever were, or could be, actually separated, and there is no discussion of any other embodiment other than a helically wound continuous-wire stent. Id.

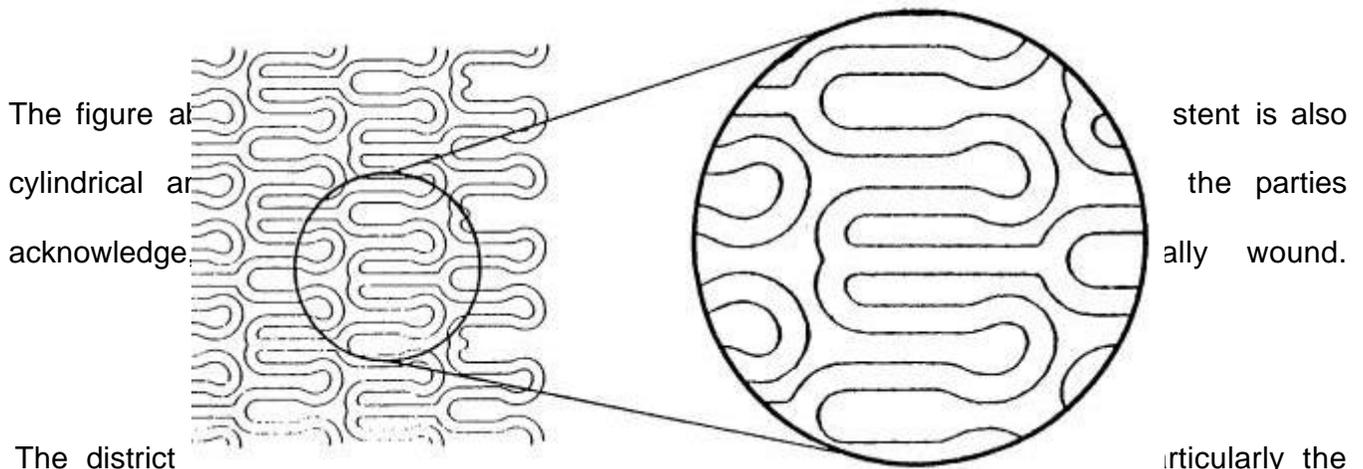


**FIG. 2**

The preliminary amendment aims at issue in the present case include dependent claims that depend from either claim 1 or claim 11. The apparatus claims for “[a] medical device for use in the interior of a body lumen comprising . . . a radially expandable stent.” '727 patent, col. 7, l. 65 – col. 8, l. 1 (claim 1), col. 8, ll. 37-40 (claim 11). Both claim 1 and claim 11 also recite that the stent comprises “means for connecting adjacent wire elements together” (claim 1) or “means for connecting adjacent elements together” (claim 11). '727 patent, col. 8, ll. 14-15 (claim 1), l. 54 (claim 11). The parties do not dispute that these are means-plus-function limitations, governed by 35 U.S.C. § 112, paragraph 6. These limitations are at the heart of this case.

## B. The Accused Device

The accused device is the ACS RX Multi-Link™ Stent, a portion of which is shown below.



The district court, particularly the means-plus-function limitations in claims 1 and 11. The district court: (1) offered the parties its proposed claim construction; (2) then held a Markman hearing during which it invited further briefing on the means-plus-function limitations in question; (3) thereafter, the district court issued an order refining its claim construction; and (4) in response to yet further briefing by the parties, later informed the parties that a final claim construction on the means-plus-function limitations would be provided prior to the jury's deliberations. This all occurred before trial.

After trial, the district court construed the means-plus-function limitations in question to cover only the disclosed helical windings, and their equivalents. Notably, the district court did not construe the straight wires, hooks, and sutures as being corresponding structure. Medtronic conceded that there could be no infringement under this construction and it did not oppose Defendants' Rule 50(a) motion for judgment as a matter of law ("JMOL"). The district court granted the motion in a detailed opinion explaining its claim construction.

Medtronic appeals, and Defendants cross appeal, the district court's judgment, challenging the claim construction. [3] We have exclusive appellate jurisdiction. 28 U.S.C. § 1295(a)(1) (1994).

## DISCUSSION

### A. Standard of Review

This court reviews a district court's grant of JMOL de novo and reapplies the JMOL standard. Markman v. Westview Instruments, Inc., 52 F.3d 967, 975, 34 USPQ2d 1321, 1326 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370, 38 USPQ2d 1461 (1996). JMOL of non-infringement is properly granted if no reasonable jury could have

concluded that a limitation recited in the properly construed claim is found in the accused device, either literally or under the doctrine of equivalents. See Dawn Equip. Co. v. Ky. Farms Inc., 140 F.3d 1009, 1014, 46 USPQ2d 1109, 1112 (Fed. Cir. 1998).

A finding of non-infringement requires a two-step analytical approach. First, the claims of the patent must be construed to determine their scope. Carroll Touch, Inc. v. Electro Mech. Sys., Inc., 15 F.3d 1573, 1576, 27 USPQ2d 1836, 1839 (Fed. Cir. 1993). Claim construction is a matter of law and is reviewed de novo on appeal. Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1456, 46 USPQ2d 1169, 1174 (Fed. Cir. 1998) (en banc). Second, the properly construed claims must be compared to the accused device. Carroll Touch, 15 F.3d at 1576, 27 USPQ2d at 1839.

### B. Claim Construction

As explained in the remainder of this opinion, the means-plus-function limitations are dispositive in this case.<sup>[4]</sup> The district court and the parties all recognized that these limitations are governed by section 112, paragraph 6 which provides that “[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof.” 35 U.S.C. § 112, para. 6 (1994).

Although the means-plus-function limitations of claims 1 and 11 are slightly different, we need

only address the limitation of claim 11, “means for connecting adjacent elements together.” ’727 patent, col. 8, l. 54. This is because the means-plus-

function limitation of claim 1, “means for connecting adjacent wire elements together,” compared to that in claim 11, contains the additional claim term “wire,” which can only make the claim 1 limitation more narrow than that in claim 11. Id. at l. 14. As we will explain, there is no infringement of the claim 11 limitation; accordingly, there can be no infringement of the claim 1 limitation. See Wahpeton Canvas Co. v. Frontier, Inc., 870 F.2d 1546, 1552 n.9, 1553, 10 USPQ2d 1201, 1207 n.9, 1208 (Fed. Cir. 1989) (explaining, in the context of dependent claims, that if a broad claim is not infringed, then another claim that is strictly narrower is also not infringed); Wilson Sporting Goods Co. v. David Geoffrey & Assocs., 904 F.2d 677, 685-86, 14 USPQ2d 1942, 1949 (Fed. Cir. 1990) (quoting Wahpeton and noting an exception, not applicable to the present case, when the broad claim’s range of equivalents encompasses prior art).

### 1. District Court’s Opinion

The district court first identified the function of the limitation “means for connecting adjacent elements together” as “connecting adjacent elements together,” and then determined that the only structure identified in the specification as corresponding to this function was the helical winding of the continuous wire. See ’727 patent, col. 4, ll. 5-7. The district court rejected Medtronic’s argument that the straight wire and hooks of Figures 7 and 8, respectively, also correspond to the claimed function. The district court reasoned that the specification itself described the straight wire and hooks as “means to prevent longitudinal overstretch” and did not refer to these structures as means for connecting adjacent elements. Medtronic, slip op. at 14. The district court acknowledged that these structures may, in fact, also perform the function of connecting. But the district court concluded that “such coincidence is not sufficient under the strict requirements of the means-plus-function doctrine.” Id. at 15. In particular, the district court

determined that there was no clear link or association, as required by our case law, between the claimed function and the straight wire and hooks. B. Braun Med., Inc. v. Abbott Labs., 124 F.3d 1419, 43 USPQ2d 1896 (Fed. Cir. 1997).

## 2. Parties' Positions

Medtronic argues that the district court improperly required exact word-matching in identifying structure corresponding to the function of connecting adjacent elements together. Medtronic points out that means-plus-function limitations are to be construed from the vantage point of one skilled in the art, and asserts that all those skilled in the art that testified at the trial acknowledged that the straight wire, hooks, and sutures are capable of performing the function recited in the limitation. Medtronic urges that determining whether there is a clear link or association, under Braun, must be done from the perspective of a person skilled in the art. Medtronic also argues that the doctrine of claim differentiation requires a broad construction in claims 1 and 11 of the corresponding structure, pointing to dependent claims 7 and 18 that specifically recite that the means in question "is an end-to-end helical winding." '727 patent, col. 8, ll. 27-28 (claim 7), col. 9, ll. 2-3 (claim 18).

Medtronic also urges several more bases for a reversal: (1) a disclosed structure is not necessarily or presumptively limited to a single function, and the straight wire, hooks, and sutures are capable of performing both the recited function and the function of preventing overstretch; (2) a claimed function is not restricted to a single corresponding structure, and the '727 specification provides a multitude of structures corresponding to the function of connecting elements, including the straight wire, hooks, sutures, and helical winding; (3) an information disclosure statement ("IDS") in the '732 prosecution history shows that the straight wire, hooks, and sutures are structure corresponding to the function of connecting elements; (4) an obviousness-type double-patenting rejection, of the '727 application over the '732 patent, shows that the straight wire, hooks, and sutures are structure corresponding to the function of connecting adjacent

elements together; and (5) the selection by the patent examiner of Figure 7 for the face of the patent shows that at least the straight wire is structure corresponding to the function of connecting adjacent elements together.

Defendants counter each of Medtronic's arguments and argue, further, that the patentee's remarks in the preliminary amendment, filed with the '727 application, preclude Medtronic from arguing that the straight wire, hooks, and sutures are structure corresponding to the function of connecting adjacent elements together.

### 3. Analysis

The limitation in question is "means for connecting adjacent elements together." '727 patent, col. 8, l. 54 (claim 11). "Because this limitation is expressed in 'means plus function' language and because it does not recite definite structure in support of its function, it is subject to the requirements of 35 U.S.C. § 112, ¶ 6 (1994)." Braun, 124 F.3d at 1424, 43 USPQ2d at 1899. The first step in construing such a limitation is a determination of the function of the means-plus-function limitation. Micro Chem., Inc. v. Great Plains Chem. Co., 194 F.3d 1250, 1258, 52 USPQ2d 1258, 1263 (Fed. Cir. 1999). The next step is to determine the corresponding structure described in the specification and equivalents thereof. Id. "Structure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." Braun, 124 F.3d at 1424, 43 USPQ2d at 1900.

The district court properly determined the function to be "connecting adjacent elements together." Medtronic, slip op. at 10. The district court also properly looked to the specification for corresponding structure. The parties do not dispute, and we agree, that the helical windings are corresponding structure. The dispute centers on whether the straight wire and hooks of Figures 7 and 8, and the sutures, are corresponding structure. We agree with Medtronic that each of these

structures is capable of performing the recited function. See '727 patent, col. 4, ll. 57-63. However, that is not the focus of the inquiry. We must determine whether the straight wire, hooks, or sutures is clearly linked or associated with the function of connecting adjacent elements together. We agree with the district court that they are not.

a.

Our inquiry is controlled by this court's decision in Braun. In Braun, the question was what structure corresponded to the function of "holding said disc firmly against said first means in such a manner that said disc is restrained from sideways movement." Braun, 124 F.3d at 1422, 43 USPQ2d at 1898 (quoting claim). The specification, according to Braun, was very clear in linking a cross bar with this function. Id. at 1424, 43 USPQ2d at 1899-1900. The patentee in Braun argued that another structure, a valve seat, also performed the function of restraining sideways movement. Id. at 1424, 43 USPQ2d at 1900. The court stated that neither the specification nor the prosecution history contained any indication that the valve seat held the disc against the triangular structure (the first means) so as to restrain sideways movement. Id. at 1425, 43 USPQ2d at 1900. Although it is not clear to us that the valve seat could never perform the recited function of restraining sideways movement, the specification apparently made no connection between the valve seat and this function.

The present case diverges from the facts of Braun only in that the alleged corresponding structure, that is, the straight wire, hooks, and sutures, are definitely capable of performing the function recited in the means-plus-function limitation, that is, connecting adjacent elements together. We find, however, that this is insufficient under the Braun test because, as explained below, there is no clear link or association between the disclosed structures and the function recited in the means-plus-function claim limitation.

b.

We first examine the specification for a clear link or association. The '727 specification, as with the '062 application and the '732 application, describes the stent only as a helically wound continuous-wire stent. The language introduced in the preliminary amendment, however, includes a single paragraph that attempts to recast the invention of the '727 patent in the theoretical framework of a stent made up of individual elements. The preliminary amendment states, in relevant part:

Thus, according to the present invention shown in Fig. 2, a radially expandable stent 1 is in the form of a hollow cylinder defined by a sequence of spaced apart wire elements 2b-f with each of the wire elements 2b-f extending 360 degrees around the cylinder and the wire elements 2b-f having extendible, sinusoidal zig-zags 3b-c . . . .

To the extent that this recasting attempts to identify separate conceptual elements of a continuous wire, it succeeds. But to the extent that it attempts to establish that the elements are, or can be, physically separated, and thus need to be connected, it fails. One skilled in the art, after reading the specification, is left with the conviction that nothing more than a helically wound continuous-wire stent is disclosed, even if each of the turns of the helically wound wire is referred to as a separate element.

That conclusion is supported by at least two observations. First, the specification never states that the elements (2b-f) are, or ever have been, actually separated. The sole disclosure in the specification is that of a continuous-wire stent. Second, even assuming that the elements are or could be separated, the specification nowhere describes how the elements are or could be connected. Medtronic argues that the specification states, after referring to the turns of the helically wound wire as separate elements, that “[t]he adjacent wire elements 2b-f are flexibly connected together in an end-to-end fashion by means of the helical winding.” '727 patent, col. 4, ll. 5-7. But the only interconnection disclosed is that which is inherent in the continuous formation of the illustrated and described helical winding.

Later in the specification, the problem of longitudinal overstretch is introduced and the three

remedies are described. One skilled in the art is informed by the disclosure that the overstretch problem relates to the described helically wound continuous-wire stent, and the solutions to that problem are applied to such helically wound continuous-wire stent. Indeed, the specification states that “[t]he invention includes means for restraining coils of the helix from longitudinal [overstretch],” and that “the stretch limiting means guarantees a constant and uniform pitch of the helical wire formed [sic] coil.” ’727 patent, col. 4, ll. 51-53, 64-65. Thus, the specification characterizes and describes the straight wire, wire hooks, and suture ties of the overstretch prevention structures as being applied to the formed and already interconnected “coils of the helix” or “helical wire formed coil.” While it is unquestionably true that the structures are connected to the coils of the helically wound stent, their function, as made clear in the specification, is not to connect adjacent elements of the helix together, but to prevent overstretch of the formed coil. Indeed, there is no disclosed embodiment or described application of the overstretch prevention structures to a helix in which adjacent coils or elements are not already connected independently of the overstretch prevention structures. Thus, one skilled in the art would not perceive any clear link or association between these structures and the function of connecting adjacent elements together.

The claims reinforce this lack of a clear link or association. Claims 7 and 18, which are dependent on claims 1 and 11, respectively, recite that the means for connecting the adjacent elements is an end-to-end helical winding. ’727 patent, col. 8, ll. 27-28 (claim 7), col. 9, ll. 2-3 (claim 18). But the patentee did not include any dependent claims reciting that the means for connecting the adjacent elements could be the straight wire, hooks, or sutures. Although it was not necessary for the patentee to do this, it would have been an easy way to draw a clear link or association that is otherwise missing.

Medtronic’s claim differentiation argument cannot mend this lack of a clear link or association. Medtronic asserts that under the district court’s construction, the literal scope of claims 1 and 11

is the same as that of claims 7 and 18, respectively, which recite an end-to-end helical winding. From this, Medtronic argues that: (1) the doctrine of claim differentiation requires that independent claims 1 and 11 be construed more broadly than the dependent claims 7 and 18; and (2) claims 1 and 11 must, therefore, be construed to cover the structure of the straight wire, hooks, and sutures. It is settled law, however, that independent claims containing means-plus-function limitations do not have the same literal scope as dependent claims reciting specifically the structure that performs the stated function. Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 1538, 19 USPQ2d 1367, 1371 (Fed. Cir. 1991) (“In any event, [the independent and dependent claims] do not . . . thereby have exactly the same scope and, thus, claim differentiation is maintained. [The independent claim] remains broader than [the dependent claim]. Literally, [the independent claim] covers the structure described in the specification and equivalents thereof. [The dependent claim] does not literally cover equivalents . . . .” (citation omitted)).

The lack of a clear link or association between the structures for limiting longitudinal overstretch and the function of connecting adjacent elements together also nullifies the significance of Medtronic’s arguments that a structure may perform two functions and that a function may be performed by two structures. These truisms are irrelevant in the context of a § 112, paragraph 6 analysis without a clear link or association between the function or functions recited in the means-plus-function limitation and the structure or structures disclosed in the specification for carrying out those functions.

c.

The prosecution history also supports the proposition that a clear link or association is absent in this case between the function of connecting adjacent elements together and the structures of the straight wire, wire hooks, or suture ties. In the ’727 application, a preliminary amendment was filed adding new claims and amending the description of the helical coil.[\[5\]](#) The patentee did not

amend the description of the longitudinal overstretch limiting structures, even though it would have been a simple matter to identify the straight wire, hooks, or sutures as performing the function of connecting adjacent elements together. The preliminary amendment stated that “[t]he subject matter of [the claims] presented herein is disclosed in [the ’062 application].” This “subject matter” included the means-plus-function limitations in question. Because the ’062 patent does not contain any disclosure of the structures for limiting longitudinal overstretch, the statement in the preliminary amendment suggests to one skilled in the art that the patentee did not link or associate those structures with the newly claimed function of connecting adjacent elements together. Thus, the prosecution history reinforces our conclusion, drawn from the specification, that one of skill in the art would not discern the required clear link or association.

d.

We next address Medtronic’s argument concerning the obviousness-type double patenting rejection. Medtronic essentially urges that the ’732 patent claimed the straight wire and hooks and, therefore, “[t]o give meaning to the examiner’s double patenting rejection, the straight wire and hooks must be covered by the ’727 claims.” But there is no discussion of any claim limitation by the examiner, or by Medtronic in its reply to the rejection, [\[6\]](#) that would indicate that this rejection related in any way to the straight wire and hooks being structure corresponding to the function of connecting adjacent elements together. The examiner’s only reference to the claims of the ’732 patent was to state that the ’727 application and the ’732 patent “claim[ed] common subject matter such as that disclosed in [sic] broadly in claim 1 of the [’732] patent.” But claim 1 of the ’732 patent recites a stent with, among other limitations, a “body formed of generally continuous wire . . . wherein the wire is a coil of successive windings.” ’732 patent, col. 8, ll. 5-7. Therefore, the rejection could have been based on the helical winding and not, as Medtronic urges, the straight wire and hooks. Accordingly, we reject Medtronic’s argument. See DeMarini Sports, Inc. v. Worth, Inc., 239 F.3d 1314, 1326, 57 USPQ2d 1889, 1896 (Fed. Cir. 2001)

“Drawing inferences of the meaning of claim terms from an examiner’s silence is not a proper basis on which to construe a patent claim, and we reject [plaintiff-appellant’s] arguments predicated on such inferences.”).

e.

We now turn to Medtronic’s remaining arguments. Medtronic accuses the district court of engaging in exact-word matching in the search for structure corresponding to the function of connecting adjacent elements together. This is an inaccurate portrayal of the district court’s analysis and is given no consideration. Medtronic also argues that the selection by the patent examiner of Figure 7 for the face of the patent shows that at least the straight wire is structure corresponding to the function of connecting adjacent elements together. This argument lacks merit because Figure 7 also shows a helically wound continuous-wire coil. Thus, there is no basis for asserting that the straight wire, and not the helical coil, corresponds to the function of connecting adjacent elements together. Medtronic’s argument also misinterprets the plain words of the Manual of Patent Examining Procedure, § 1302.10, upon which it relies. Section 1302.10 requires only that the figure “should be consistent with the claim to be printed in the Official Gazette” and later indicates that the figure need only be “illustrative of or helpful in understanding the claimed invention.” United States Dep’t of Commerce, Patent and Trademark Office, Manual of Patent Examining Procedure, § 1302.10 (6th ed., Incorporating Rev. No. 3, July 1997). Section 1302.10 does not require, as Medtronic suggests, that the selected figure illustrate every limitation of the claimed invention. Id.

Medtronic also argues that a singular reference in an IDS, filed in the prosecution of the ’732 application, to “longitudinal connecting means” requires a broader construction of the means-plus-function limitation in question. However, none of the claims of the ’732 patent contain the same limitation that we are construing from the ’727 patent. Accordingly, we decline Medtronic’s invitation to consider the ’732 patent’s prosecution history for the purpose of

construing the limitation in question. Cf. Elkay Mfg. Co. v. Ebco Mfg. Co., 192 F.3d 973, 980, 52 USPQ2d 1109, 1114 (Fed. Cir. 1999) (“When multiple patents derive from the same initial application, the prosecution history regarding a claim limitation in any patent that has issued applies with equal force to subsequently issued patents that contain the same claim limitation.”).

Finally, Medtronic argues that the district court did not construe the claims from the vantage point of a person skilled in the art consistent with the testimony of the expert witnesses. On this point, Medtronic’s argument misses the mark because Medtronic only points out that the experts agreed that a person skilled in the art would believe that the straight wire, hooks, and sutures were capable of performing the recited function. Medtronic does not argue, and the experts did not testify, that a person skilled in the art would believe that there was a clear link or association between the recited function and the structures in question, as required under Braun. These are different inquiries with different consequences.

f.

Despite the fact that the straight wire, wire hooks and suture ties can perform the recited function of connecting adjacent elements together, neither the specification nor the prosecution history of the ’727 patent, either alone or in combination, provides a clear link or association with the recited function. Thus, we hold that the only structure corresponding to the function of the means-plus-function limitation in issue is the helical winding.

### C. Infringement

The district court stated that, under its claim construction of the means-plus-function limitations, Medtronic conceded that there could be no infringement. Medtronic, slip op. at 4, 17. The record shows that Medtronic did indeed make such a concession and Medtronic does not contest this issue on appeal. Because our construction of the means-plus-function limitation is the same as the district court’s, Medtronic’s concession disposes of the infringement issue. Accordingly, we

affirm the judgment of non-infringement.

AFFIRMED

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[1] There was an additional continuation application filed between the '732 application and the '727 application. This intervening application was filed shortly before the '732 patent issued. The intervening application is not relevant to this suit.

[2] The use of sutures to tie adjacent windings together is described in the '727 patent at column 4, line 59, but is not illustrated in any of the drawings.

[3] Medtronic also appeals the district court's formulation of one of the jury instructions. However, the instruction was not read to the jury and the jury never rendered a verdict. We decline to address this issue because it is not ripe and, given our holding that JMOL of non-infringement was proper, moot.

[4] Medtronic also appeals the district court's claim construction of the terms "zig zags lying flat" and "generally sinusoidal," and Defendants cross appeal the district court's claim construction of "wire elements." Because our construction of the means-plus-function limitation renders each of these issues moot, we decline to address them.

[5] The preliminary amendment filed with the '727 application indicates that the newly submitted claims contained terms or phrases that did not have proper antecedent basis, as required by 37 CFR § 1.75(d)(1), and that the changes to the specification supplied the required antecedent basis.

[6] Medtronic responded to the rejection by filing a terminal disclaimer, without making any arguments regarding the limitations of the claims of the '732 patent or the '727 application.