

**REVOCATION OF POWER OF ATTORNEY  
WITH A NEW POWER OF ATTORNEY,  
CHANGE OF CORRESPONDENCE ADDRESS,  
AND STATEMENT UNDER 37 C.F.R. § 3.73(b)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

I hereby revoke all previous powers of attorney given in the following applications and or patents:

<b>U.S. Patent Application Serial No. or Patent No.</b>	<b>Title</b>
10/478,161	CATHETER BALLOONS
11/745,877	EXPANDABLE STENTS
12/300,475	ANGIOPLASTY MEDICAL DEVICES MADE OF ELASTOMERIC MATERIAL
12/159,649	ENDOLUMINAL PROSTHESIS
10/538,913	ENDOLUMINAL PROSTHESIS
11/931,302	ENDOLUMINAL PROSTHESIS
11/996,378	ENDOLUMINAL PROSTHESIS
6,746,477	EXPANDABLE STENT
D581054	MATERIAL FOR AN EXPANDABLE STENT
6,635,029	DILATION CATHETER STRUCTURE
7,846,128	CATHETER AND METHOD FOR MAKING SAME
7,722,659	ENDOLUMINAL PROSTHESIS
5,626,603	HYDRAULIC STENT INSERTER
6,322,560	CATHETER FOR RADIOFREQUENCY ABLATION OF TUMORS
6,652,519	ELECTRODE NEEDLE WITH RADIOFREQUENCY ACTIVE FILAMENT
6,007,545	DILATING CATHETER FOR THE INTRODUCTION OF EXPANDABLE STENTS
5,971,990	SYSTEM FOR INTRODUCING AND POSITIONING EXPANDABLE STENTS
6,623,481	ELECTROSURGICAL PROBE FOR TUMOR TREATMENT BY RADIOFREQUENCY
6,595,953	ENDOVASCULAR SYSTEM FOR THE TREATMENT OF STENOSES OF THE CAROTID AND CATHETER FOR THIS SYSTEM
7,083,594	ENDOVASCULAR SYSTEM FOR THE TREATMENT OF STENOSES OF THE CAROTID AND CATHETER FOR THIS SYSTEM
7,384,412	ENDOVASCULAR SYSTEM FOR THE TREATMENT OF STENOSES OF THE CAROTID AND CATHETER FOR THIS SYSTEM

I hereby appoint the Practitioners associated with Customer Number 28390 as my attorneys to prosecute the applications and/or patents identified above, and to transact all business in the United States Patent and Trademark Office for the above-identified patent applications and/or patents.

In addition, please change the correspondence address for the applications listed above to the address associated with Customer Number 28390.

**Statement Under 37 C.F.R. § 3.73(b)**

Medtronic, Inc., a corporation of the State of Delaware, hereby represents that it is exclusive owner of the entire right, title and interest in and to each of the following applications and/or patents by virtue of the respective assignment recorded therein as indicated below:

<b>U.S. Patent Application Serial No. or Patent No.</b>	<b>Title</b>	<b>Recorded in the United States Patent and Trademark Office at</b>
10/478,161	CATHETER BALLOONS	Reel/Frame: 023937/0758
11/745,877	EXPANDABLE STENTS	Reel/Frame: 023937/0758
12/300,475	ANGIOPLASTY MEDICAL DEVICES MADE OF ELASTOMERIC MATERIAL	Reel/Frame: 023937/0758
12/159,649	ENDOLUMINAL PROSTHESIS	Reel/Frame: 023937/0758
10/538,913	ENDOLUMINAL PROSTHESIS	Reel/Frame: 023937/0758
11/931,302	ENDOLUMINAL PROSTHESIS	Reel/Frame: 023937/0758
11/996,378	ENDOLUMINAL PROSTHESIS	Reel/Frame: 023937/0758
6,746,477	EXPANDABLE STENT	Reel/Frame: 023937/0758
D581054	MATERIAL FOR AN EXPANDABLE STENT	Reel/Frame: 023937/0758
6,635,029	DILATION CATHETER STRUCTURE	Reel/Frame: 023937/0758
7,846,128	CATHETER AND METHOD FOR MAKING SAME	Reel/Frame: 023937/0758
7,722,659	ENDOLUMINAL PROSTHESIS	Reel/Frame: 023937/0758
5,626,603	HYDRAULIC STENT INSERTER	Reel/Frame: 023937/0758
6,322,560	CATHETER FOR RADIOFREQUENCY ABLATION OF TUMORS	Reel/Frame: 023937/0758
6,852,519	ELECTRODE NEEDLE WITH RADIOFREQUENCY ACTIVE FILAMENT	Reel/Frame: 023937/0758
6,007,545	DILATING CATHETER FOR THE INTRODUCTION OF EXPANDABLE STENTS	Reel/Frame: 023937/0758
5,971,990	SYSTEM FOR INTRODUCING AND POSITIONING EXPANDABLE STENTS	Reel/Frame: 023937/0758
6,623,481	ELECTROSURGICAL PROBE FOR TUMOR TREATMENT BY RADIOFREQUENCY	Reel/Frame: 023937/0758
6,595,953	ENDOVASCULAR SYSTEM FOR THE TREATMENT OF STENOSES OF THE CAROTID AND CATHETER FOR THIS SYSTEM	Reel/Frame: 023937/0758

7,083,594	ENDOVASCULAR SYSTEM FOR THE TREATMENT OF STENOSES OF THE CAROTID AND CATHETER FOR THIS SYSTEM	Reel/Frame: 023937/0758
7,384,412	ENDOVASCULAR SYSTEM FOR THE TREATMENT OF STENOSES OF THE CAROTID AND CATHETER FOR THIS SYSTEM	Reel/Frame: 023937/0758

The undersigned, whose title is supplied below, is authorized to act on behalf of the Assignee.

Date: July 18, 2011

  
\_\_\_\_\_  
Michael J. Jaro  
Title: Vice President and Chief Patent Counsel  
Telephone: (763) 505-2519

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	10565625
<b>Application Number:</b>	10538913
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	5133
<b>Title of Invention:</b>	Endoluminal prosthesis
<b>First Named Inventor/Applicant Name:</b>	Andrea Venturelli
<b>Customer Number:</b>	26936
<b>Filer:</b>	William L. Haynes/Kim Grigg
<b>Filer Authorized By:</b>	William L. Haynes
<b>Attorney Docket Number:</b>	5659
<b>Receipt Date:</b>	21-JUL-2011
<b>Filing Date:</b>	29-SEP-2005
<b>Time Stamp:</b>	09:18:04
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	RevPOANewPOAChangeAttyA ddress373Statement.pdf	256837 <small>ad19f3284ad006863de316206067ff0be219 934a</small>	no	3

### Warnings:

### Information:

**This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.**

**New Applications Under 35 U.S.C. 111**

**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

**National Stage of an International Application under 35 U.S.C. 371**

**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

**New International Application Filed with the USPTO as a Receiving Office**

**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,913	09/29/2005	Andrea Venturelli	5659	5133
26936	7590	05/13/2010	EXAMINER	
SHOEMAKER AND MATTARE, LTD 10 POST OFFICE ROAD - SUITE 100 SILVER SPRING, MD 20910			MCEVOY, THOMAS M	
			ART UNIT	PAPER NUMBER
			3731	
			MAIL DATE	DELIVERY MODE
			05/13/2010	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



United States Patent and Trademark Office

Under Secretary of Commerce for Intellectual Property and  
Director of the United States Patent and Trademark Office

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SHOEMAKER AND MATTARE, LTD  
10 POST OFFICE ROAD - SUITE 100  
SILVER SPRING, MD 20910

Appeal No: 2010-007594  
Application: 10/538,913  
Appellant: Andrea Venturelli

## Board of Patent Appeals and Interferences Docketing Notice

Application 10/538,913 was received from the Technology Center at the Board on May 03, 2010 and has been assigned Appeal No: 2010-007594.

In all future communications regarding this appeal, please include both the application number and the appeal number.

The mailing address for the Board is:

BOARD OF PATENT APPEALS AND INTERFERENCES  
UNITED STATES PATENT AND TRADEMARK OFFICE  
P.O. BOX 1450  
ALEXANDRIA, VIRGINIA 22313-1450

The facsimile number of the Board is 571-273-0052. Because of the heightened security in the Washington D.C. area, facsimile communications are recommended. Telephone inquiries can be made by calling 571-272-9797 and referencing the appeal number listed above.

By order of the Board of Patent Appeals and Interferences.



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United States Patent and Trademark Office  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,913	09/29/2005	Andrea Venturelli	5659	5133
26936	7590	04/27/2010	EXAMINER	
SHOEMAKER AND MATTARE, LTD 10 POST OFFICE ROAD - SUITE 100 SILVER SPRING, MD 20910			MCEVOY, THOMAS M	
			ART UNIT	PAPER NUMBER
			3731	
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			04/27/2010	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



**UNITED STATES DEPARTMENT OF COMMERCE**

**U.S. Patent and Trademark Office**

Address : COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10538913	9/29/2005	VENTURELLI, ANDREA	5659

SHOEMAKER AND MATTARE, LTD  
10 POST OFFICE ROAD - SUITE 100  
SILVER SPRING, MD 20910

**EXAMINER**

THOMAS MCEVOY

ART UNIT	PAPER
3731	20100424

DATE MAILED:

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner for Patents**

The reply brief filed January 25<sup>th</sup> 2010 has been entered. It is noted that additional arguments were presented that could have been raised in the appeal brief. The application has been forwarded to the Board of Patent Appeals and Interferences for decision on the appeal.

/Anhtuan T. Nguyen/  
Supervisory Patent Examiner, Art Unit 3731

/Thomas McEvoy/  
Examiner, Art Unit 3731

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No. : **10/538913**  
Applicant : Venturelli  
Filing date : June 13, 2005  
Title : Endoluminal Prosthesis  
TC/A.U. : 3731  
Examiner : **McEvoy**  
Docket No. : **5659**  
Customer No. : 26936

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**APPELLANTS' REPLY BRIEF**

Please consider the following comments on five points of the Examiner's Answer:

**Relevant passage of the Examiner's Answer (EA):**

[01] Page 5, lines 7-8 of the EA

Fischell et al. teach using bridges to attach one outer lobe of opposing w-shaped modules for increased flexibility while allowing for the stent to have reduced diameter upon crimping onto a balloon, as well as reduced flaring of the outer lobes.

[02] Page 5, lines 11-13 of the EA

Here, in addition to providing one shortened outer lobe, Fischell et al. essentially teach that providing bridges on every other outer lobe prevents the bridge from interfering with each other when the stent is crimped to a small diameter.

[03] Page 6, lines 1-2 of the EA

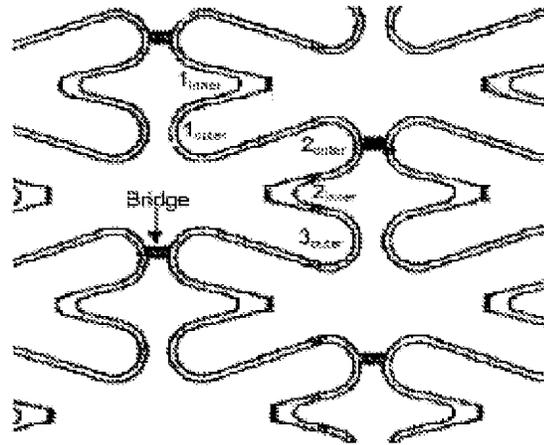
...it would have been obvious... to modify Dang's stent to include Fischell et al's bridges.

[04] Page 6, lines 4-8 of the EA

...since Dang discloses that the bridge should connect modules that open up towards each other, it would have been obvious...to attach outer lobes (in view of Fischell et al.) only to modules that open up towards each other (in view of Dang).

[05] Page 6, lines 8-10 of the EA

This would result in the structure shown below (of course with Fischell et al.'s extended bridge shape).



examiner's structure

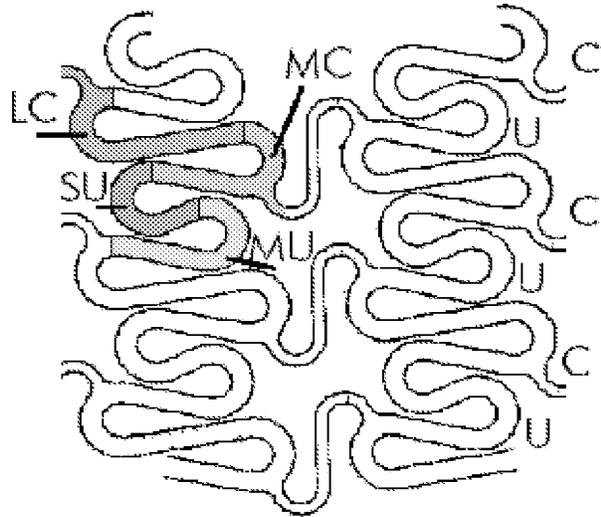
[01] Page 5, lines 7-8 of the EA

The Examiner states that “Fischell et al. teach using bridges to attach one outer lobe of opposing w-shaped modules for increased flexibility while allowing for the stent to have reduced diameter upon crimping onto a balloon, as well as reduced flaring of the outer lobes.”

Fischell et al. column 4, lines 25-29, says “Each of the interior sets of strut members 20 consists of at least one long connected strut member 24L (LC), at least one medium length connected strut member 24MC (MC), at least one medium length unconnected strut member 24MU (MU) and at least one short unconnected strut member 24S (SU).” This is Fischell’s module definition.

Col 2, lines 37-43: "... those curved sections of adjacent circumferential sets of strut members that are connected are connected with flexible longitudinal connecting links, and many (typically one-half) of the curved sections are unconnected."

Fischell et al. describes a stent 10, having a multiplicity of interior circumferential sets of strut members 20, each of the strut member consists of MC, LC, SU, MU struts. As shown in the figure above, the serpentine is a sequence of lobes, in particular a sequence of connected (C) and unconnected (U) lobes. Fischell's Certificate of Correction clearly indicates that the essential feature of this patent is the 50% ratio between the unlinked lobes and the linked lobes



Moreover, at col 2, lines 23-27, "A unique feature of the present invention is that each of the strut members whose curved sections are unconnected has a shorter longitudinal length as compared to the longitudinal length of the strut members that are connected by a longitudinal connecting link."

**[02] Page 5, lines 11-13 of the EA**

The Examiner states: "Here, in addition to providing one shortened outer lobe, Fischell et al. essentially teach that providing bridges on every other outer lobe prevents the bridge from interfering with each other when the stent is crimped to a small diameter. "

As shown in the figure above, looking the serpentine, Fischell et al. describes a module comprising two unconnected short lobes and two connected long lobes.

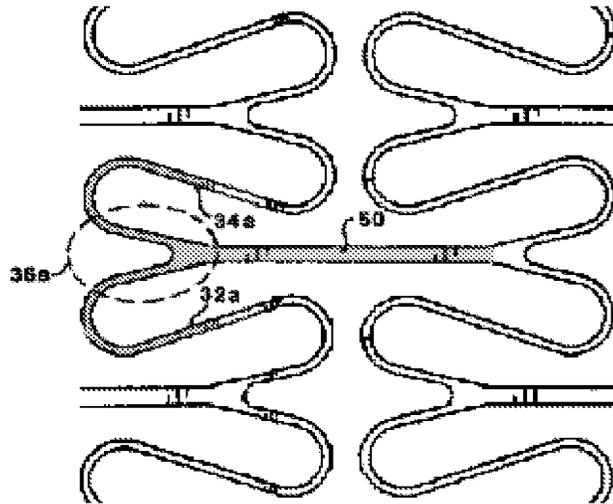
Fischell teaches one to use bridges to attach longer lobes of opposing Fischell's modules and above all to connect one lobe every two lobes.

Thus, Fischell teaches to provide bridges on every long lobe and on every two lobes.

**[03] Page 6, lines 1-2 of the EA**

The examiner concludes “...it would have been obvious... to modify Dang’s stent to include Fischell et al’s bridges.”

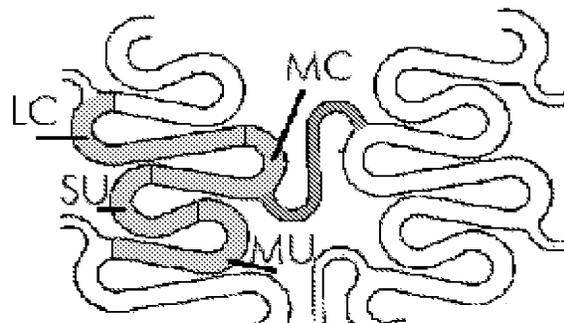
Dang column 4, lines 66-67: “Each of the W-shaped elements 30 includes a center section 36a and two outside legs 32a and 34a.” This is Dang’s module definition.



Column 5, lines 23-29: “W-shaped elements are connected to each other by a tie member 50 that is attached to the center sections of each of the W-shaped elements 32a/30b. It is preferred that the tie members 50 are attached at the peak or apex of the center sections 36.” This is Dang’s bridge definition.

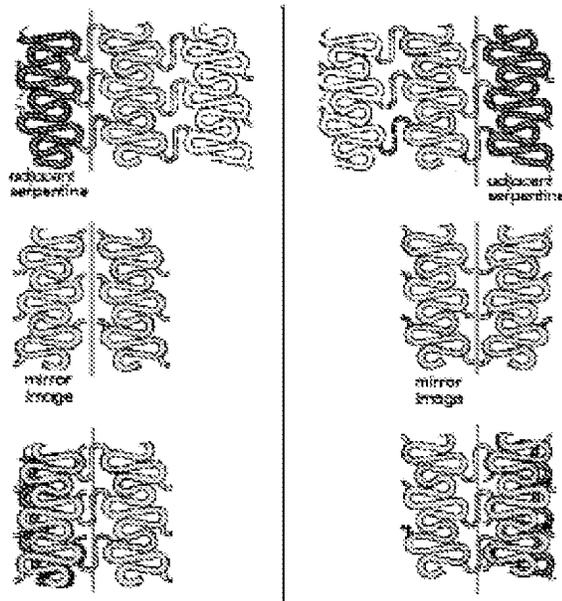
Fischell et al. Col 4. lines 43-54: “Each of the connected curved sections is joined to an adjacent connected curved section by means of a longitudinally extending, flexible longitudinal connecting link 18, that consists of a central segment 13, a bottom curved segment 14 and a top curved segment 15. The optimal placement of the junction lines 16 and 17 is at or near the connecting line 22 that joins a curved section 11 to a diagonal section 19.” This is Fischell et al.’s bridge definition.

Fischell’s bridge does not project from or connect the apex of the lobe and does not connect lobes, but does project from or connect a line that extends between the arm and the lobe.



The Examiner's conclusion that it would have been obvious to modify Dang's stent to include Fischell et al.'s bridges is wrong because:

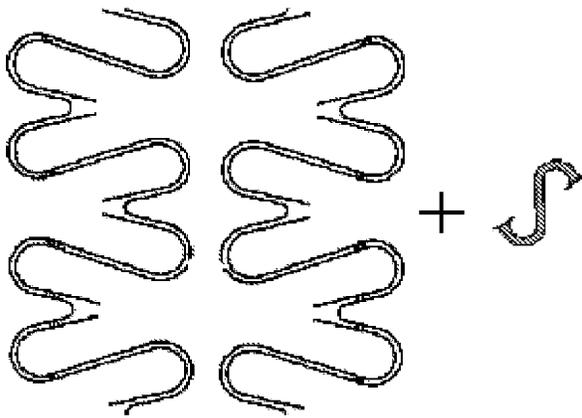
- (1) Both Dang and Fischell lack features (m), (n) and (o) for Dang and (j), (k), (m) and (o) for Fischell. Both lack features (m) and (o).<sup>1</sup>
- (2) Fischell's bridge does not project from or connect the apexes of the lobes of adjoining lines (the mirror image lines) and does not connect lobes. Rather, it projects from or connects a portion of the lines that extend between the arm and the lobe.
- (3) Fischell's adjoining lines are connected with bridges one lobes every two lobes
- (4) Fischell teaches to provide a bridges on every long lobe
- (5) Fischell teaches to provide a bridges not extended along a longitudinal axis because the adjoining lines are not mirror image but shifted angularly:



Furthermore, to modify Dang's stent (D) with Fischell et al.'s bridges (F), it is necessary to decide the position of the bridges in the serpentine. Dang discloses that the bridge should connect modules that open up towards each other (The Examiner agrees, see page 6, lines 4-5).

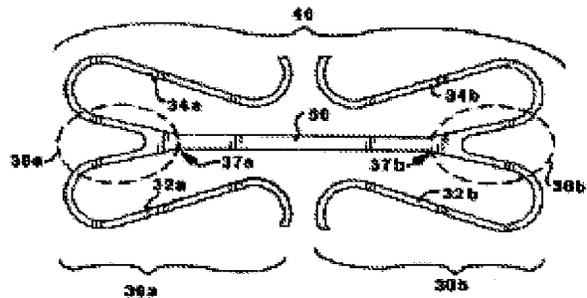
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<sup>1</sup> Feature (m): "each said bridge directly connects two opposed outer lobes of two adjacent lines and each said bridge extends along a longitudinal axis parallel to the longitudinal axis of the tubular body". Feature (o): "each said bridge is provided between two adjacent lines, for every five complete lobes of a line, three outer lobes and two inner lobes".



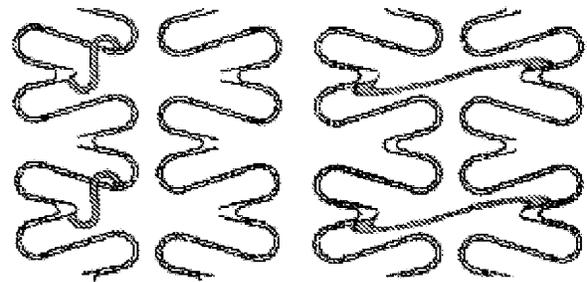
Dang, at column 5, lines 20-22, says “FIG. 3 depicts one such pair of W-shaped elements 30a and 30b that open towards each other from adjacent cylindrical sections 20.”

The only reasonable interpretation of “W-shaped elements that open towards each other” is represented in figure 3.



**FIG.3**

Considering Dang’s teaching, it is impossible to modify stent D to include bridges F without modifying the bridges F. Anyway, the DF new geometry does not have all the limitations of claim 1.



Therefore, it would not have been obvious to modify Dang’s stent to include Fischell et al.’s bridges.

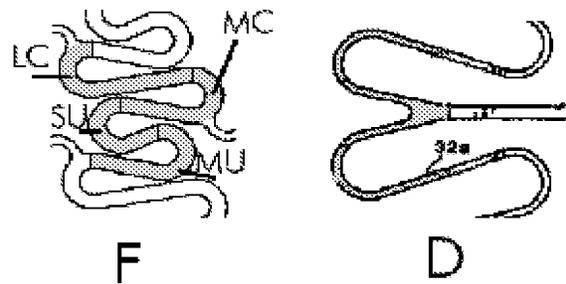
**[04] Page 6, lines 4-8 of the EA**

“...since Dang discloses that the bridge should connect modules that open up towards each other , it would have been obvious...to attach outer lobes (in view of Fischell et al.) only to modules that open up towards each other (in view of Dang).”

As discussed above, Fischell teaches to use bridges to attach longer lobes of opposing Fischell et al.'s modules, and:

- (6) Dang and Fischell lack features (m) and (o)
- (7) Fischell's bridge does not project from or connect the apexes of the lobes of adjoining lines (the mirror image lines) and does not connect lobes but instead projects from or connects a portion of the lines that extend between the arm and the lobe.
- (8) Fischell's adjoining lines are connected with bridges one lobes every two lobes
- (9) Fischell teaches to provide a bridges on every long lobe
- (10) Fischell teaches one to provide bridges not extending along a longitudinal axis because the adjoining lines are not mirror image but shifted angularly:

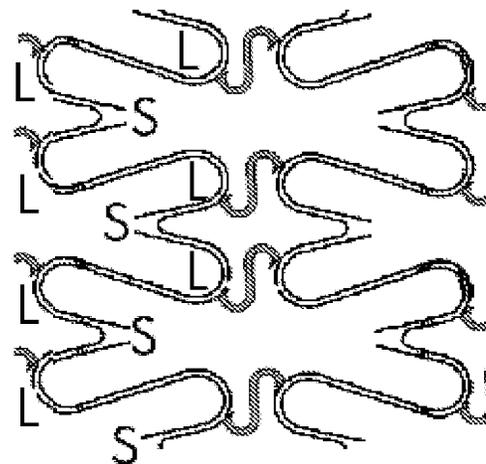
Modules F and modules D are completely different:



If one were to force the combination, applying Fischell et al.'s teaching "use bridges to attach longer lobes of opposing modules" to Dang's modules, he would obtain the FS geometry illustrated in the figure.

Even the FD new geometry does not disclose all the limitations of claim 1.

Therefore, it would not have been obvious to modify Dang's stent to include Fischell et al.'s bridges.



“This would result in the structure shown below (of course with Fischell et al.’s extended bridge shape)...”

Fischell et al. Col 6, lines 52-60 states

“Although the greatest longitudinal flexibility for the stent 10 is obtained by connecting some of adjacent sets of strut members with

flexible longitudinal connecting links (like the

link 18), it should be understood that short, straight links could be used to connect adjacent

curved sections. This design concept is shown in FIG. 5 that is a layout view of a stent 60 that has connected curved sections 61 and 61E that are connected by straight connecting links 68.”

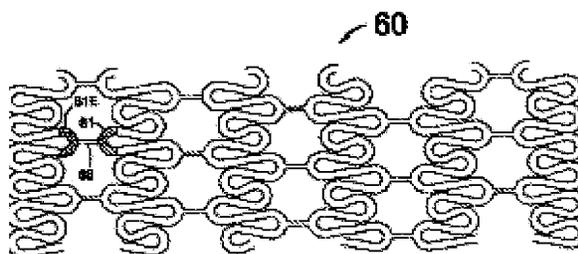
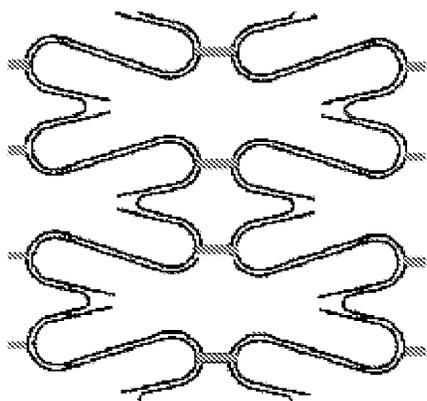


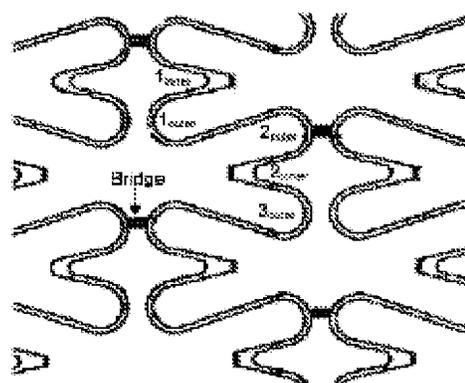
FIG. 5



If one were to apply one alternative embodiment of Fischell et al.’s bridges (and not the preferred embodiment: flexible longitudinal connecting links + optimal placement near the connecting line that joins a curved section to a diagonal section) to Dang’s modules, he would obtain the FD geometry illustrated in the figure. Regardless, the FD new geometry would not have all the limitations of claim 1.

The structure shown in the Examiner’s Answer is obtained by connecting only certain curved sections of the module in a completely arbitrary (or inventive) way. Neither Dang nor Fischell teaches one to do this.

Dang teaches: one pair of W-shaped elements 30a and 30b that open towards each other from adjacent cylindrical sections 20... are connected to each other by a tie member that is attached to the center sections of each of the W-shaped elements.



examiner's structure

Fischell teaches: each of the strut members whose curved sections are unconnected has a shorter longitudinal length as compared to the longitudinal length of the strut members that are connected by a longitudinal connecting link.

We conclude that it would not have been obvious from the prior art to modify Dang's stent to include Fischell et al.'s bridges and that, had one done so, the invention described by the claims at issue would not have resulted.

Respectfully,

/Charles Fallow/

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Charles W. Fallow  
Reg. No. 28,946

Shoemaker and Mattare, Ltd.  
10 Post Office Road - Suite 100  
Silver Spring, Maryland 20910

January 25, 2010

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	6875590
<b>Application Number:</b>	10538913
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	5133
<b>Title of Invention:</b>	Endoluminal prosthesis
<b>First Named Inventor/Applicant Name:</b>	Andrea Venturelli
<b>Customer Number:</b>	26936
<b>Filer:</b>	Charles Winston Fallow/Robyn Badman
<b>Filer Authorized By:</b>	Charles Winston Fallow
<b>Attorney Docket Number:</b>	5659
<b>Receipt Date:</b>	25-JAN-2010
<b>Filing Date:</b>	29-SEP-2005
<b>Time Stamp:</b>	16:49:47
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

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1	Reply Brief Filed	ReplyBrief.pdf	231387 <small>6eadc073086a91fa8575ba3cd1aafa2ea79769c2</small>	no	9

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**New International Application Filed with the USPTO as a Receiving Office**

**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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26936	7590	11/24/2009	EXAMINER	
SHOEMAKER AND MATTARE, LTD 10 POST OFFICE ROAD - SUITE 100 SILVER SPRING, MD 20910			MCEVOY, THOMAS M	
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/538,913  
Filing Date: September 29, 2005  
Appellant(s): VENTURELLI, ANDREA

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Charles W. Fallow  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed September 14<sup>th</sup> 2009 appealing from the Office action mailed November 17<sup>th</sup> 2008.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

US 5,935,162	DANG	8-1999
US 6,540,775	FISCHELL et al.	4-2003
US 2002/0183763	CALLOL et al.	12-2002
US 2002/0065547	MOORE	5-2002
US 6,299,604	RAGHEB et al.	10-2001

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

**Claims 1-17, 19-21, 23-31, 34, 40, 41, 43-46, and 51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dang (US 5,935,162) in view of Fischell et al. (US 6,540,775).**

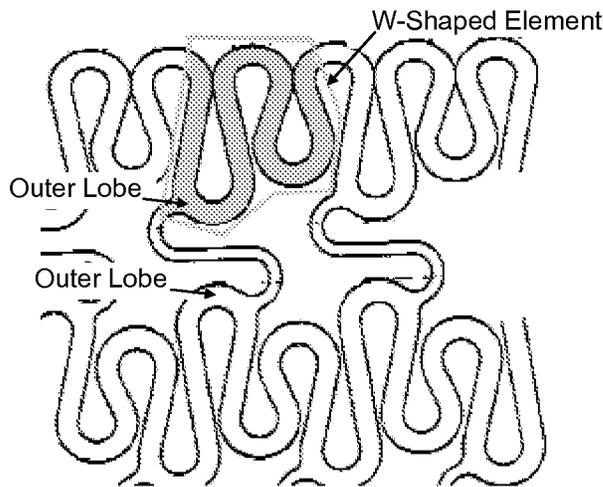
Dang discloses an expandable endolumenal prosthesis comprising in the non-expanded configuration: a tubular body (Fig. 1), the tubular body having a porous wall defined by a plurality of interlaced circumferential lines forming a pathway motif or pattern (Fig. 2) in which at least one line is closed onto itself (Fig. 2; col. 4, lines 41-43), each of the lines extends along an axis (implicit for cylindrical sections as in col. 4, lines 41-43), each of the lines comprises at least one plurality of modules 30 (Fig. 2; col. 4,

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lines 57-59), each module comprises three lobes, that is, two outer lobes and one inner lobe (in addition to module 30, inner and outer lobes can be defined arbitrarily in the prior art; consider the lower left of Fig. 2, going from down to up, three bends define three lobes: the bend to the left adjacent to the bridge defines an outer lobe, the following bend to the right defines an inner lobe and the following bend defines an outer lobe) disposed between the two outer lobes in the pathway of the pattern, each lobe comprising one or more curved sections having concavities facing in the same direction, defining an apex of the lobe (Fig. 2; any curved portion of the lobe defines a concavity; the interior corners of the lobe apex define the concavities as claimed), the lobes opening alternately on opposite sides of the pathway of the pattern along the extent of the line (col. 5, lines 29-31), both of the outer lobes of the three lobes being extended by straight outer arms (evident from Fig. 2), the at least one plurality of modules being arranged consecutively so as to have successive outer arms which extend from the outer lobes in substantially opposite directions relative to the pathway of the pattern for two successive modules (evident from Fig. 2 for the above described modules; this limitation can be met by the outer arms of a single module, however the outer arms of adjacent modules 30 also meet this limitation), for each module, the distance between the apex of one of the outer lobes and the apex of the inner lobe of the same module is less than the distance between the apex of the same outer lobe and the apex of any outer lobe of an adjoining module (less than the distance as claimed for adjoining modules within the same circumferential line; Fig. 2), for each line, there is at least one adjacent line which has a motif that is a mirror image of the said line with respect to an

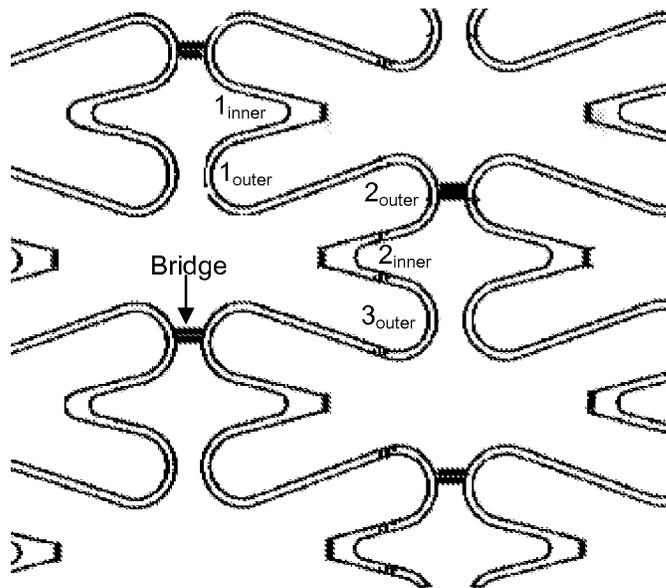
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axis parallel to the axis of the line (evident from Fig. 2), at least one connecting element or bridge is provided between two adjacent lines (Fig. 3, item 50), and in which said bridge connects two faced outer lobes of two adjacent lines, said bridge extends along a longitudinal axis parallel to the longitudinal axis of the tubular body (Fig. 2). Dang does not disclose the bridges directly connect opposed outer lobes of adjacent lines wherein each bridge is provided between two adjacent lines, for every five complete lobes of a line, three outer lobes and two inner lobes. Fischell et al. teach using bridges to attach one outer lobe of opposing w-shaped modules for increased flexibility while allowing for the stent to have a reduced diameter upon crimping onto a balloon, as well as reduced flaring of the outer lobes (col. 2, lines 37-50; col. 2, lines 58-63; col. 3, lines 17-23; col. 3, lines 31-36; col. 5, lines 10-14; col. 5, lines 2-9 – here, in addition to providing one shortened outer lobe, Fischell et al. essentially teach that providing bridges on every other outer lobe prevents the bridges from interfering with each other when the stent is crimped to a small diameter). See below:



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Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Dang's stent to include Fischell et al.'s bridges. Such a modification allows for improved flexibility, minimum crimpable diameter and reduced outer lobe flaring. Furthermore, since Dang discloses that the bridge (tie members) should connect modules ("w-shaped" elements) that open up towards each other (Abstract; Figure 2), it would have been obvious to one of ordinary skill in the art to attach outer lobes (in view of Fischell et al.) only to modules that open up towards each other (in view of Dang). This would result in the structure shown below (of course with Fischell et al.'s extended bridge shape) which meets the limitations of Appellant's claim 1.



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Regarding claim 2, Dang discloses the inner lobe of at least one module being extended by at least one straight inner arm (evident from Fig. 2). Regarding claim 3, Dang discloses both of the ends of the inner lobe being extended by straight arms (evident from Fig. 2). Regarding claim 4, Dang discloses at least one of the outer arms extends along an axis which is inclined to the longitudinal axis of the tubular body and is also inclined to the axis of the line to which the module belongs (evident from Fig. 2).

Regarding claim 5, Dang discloses both of the outer arms of the module extend along respective axes which are inclined to the longitudinal axis of the tubular body and are also inclined to the axis of the line to which the module belongs (evident from Fig. 2).

Regarding claim 6, Dang discloses the outer arms of the module extend away from the lobes along converging axes (evident from Fig. 2). Regarding claim 7, Dang discloses the arms have inclinations substantially close to the direction of the longitudinal axis of the prosthesis when the prosthesis is in the non-expanded configuration (evident from Fig. 2). Regarding claim 8, Dang discloses the inclination of the arms is selected in a manner such that, when the prosthesis is in the expanded configuration, the arms are arranged substantially close to the direction transverse the longitudinal axis of the prosthesis (evident from Fig. 2). Regarding claim 9, Dang discloses at least one outer arm of a module is shared with the adjacent module (evident from Fig. 2). Regarding claim 10, Dang discloses all of the outer arms of each module are shared with adjacent modules (evident from Fig. 2). Regarding claim 11, Dang discloses the outer arms are of equal extent (evident from Fig. 2). Regarding claim 12, Dang discloses the inner lobe being extended by two straight inner arms (evident from Fig. 2). Regarding claim 13,

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Dang discloses the inner arms are of equal extent (evident from Fig. 2). Regarding claim 14, Dang discloses the inner lobe is joined to the outer lobes by means of at least one inner arm (evident from Fig. 2). Regarding claim 15, Dang discloses the inner lobe and the inner arm or arms have an overall extent less than the overall extent of the outer lobes and the respective outer arms (evident from Fig. 2). Regarding claim 20, Dang discloses at least one module has two inner arms of equal extent (evident from Fig. 2). Regarding claim 23, Dang discloses at least one module comprises at least one lobe comprising at least one curved section of predefined extent suitable for determining the aperture of the cell which faces it (Fig. 2; any curved section of any lobe in Dang can be regarded in this manner). Regarding claim 24, Dang discloses at least one module comprises at least one lobe comprising at least one curved section of predefined extent suitable for arranging the arms substantially parallel to the longitudinal axis of the prosthesis when it is in the non-expanded or clenched configuration (evident from Fig. 2). Regarding claim 25, Dang discloses at least one module comprises at least one lobe comprising at least one curved section of predefined extent suitable for arranging the arms substantially transverse the longitudinal axis of the prosthesis when it is in the expanded configuration (evident from Fig. 2). Regarding claim 26, Dang discloses at least one module comprises at least one lobe comprising a plurality of curved sections with concavities having the same orientation (evident from Fig. 2; see above comments for claim 1). Regarding claim 27, Dang discloses at least one module comprises at least one lobe comprising a plurality of curved sections with concavities having the same orientation and at least one interposed straight section (Fig 2; a

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straight section of an outer arm crosses over the direction which two concavities or portions of the adjoining lobe face). Regarding claim 28, Dang discloses the inner lobe is joined directly to one of the outer lobes (evident from Fig. 2). Regarding claim 29, Dang discloses all of the modules of a line have identical characteristics (evident from Fig. 2). Regarding claim 31, Dang discloses in at least one line, the same module is repeated along the pathway of the line in a mirror-image arrangement with respect to an axis parallel to the axis of the line (evident from Fig. 2). Regarding claim 40, Dang discloses at least one module is substantially M-shaped and is arranged so as to have outer arms directed substantially either towards the distal end or towards the proximal end (evident from Fig. 2). Regarding claim 41, Dang discloses the axis of the line is substantially perpendicular to the longitudinal axis of the tubular body (evident from Fig. 2). Regarding claim 43, Dang discloses the line axis is straight or circumferential (evident from Fig. 2). Regarding claim 44, Dang discloses for each line, there is at least one adjacent line which has a motif that is a mirror image of the said line with respect to an axis parallel to the axis of the line (evident from Fig. 2). Regarding claim 45, Dang discloses at least one connecting element or bridge is provided between two adjacent lines (Fig. 3 Item 50; or as modified by Fischell et al. and described above). Regarding claim 46, Dang discloses the bridge defines the interlacing of the lines (evident from Fig. 2). Regarding claim 51, Dang discloses along the line, a bridge is provided between two adjacent lines, for every first or second outer lobe having the same orientation (Fig. 3 Item 50; or as modified by Fischell et al. and described above). Regarding claim 52, Dang discloses a bridge is provided for every module of the line (evident from Fig. 2).

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Regarding claim 53, Dang discloses between two adjacent lines, a continuous closed pathway is provided, disposed between two bridges defining a cell (evident from Fig. 2).

Regarding claims 16, 17, 19, 21, 30, and 34, Dang does not disclose the outer and inner lobes with their outer arms and inner arms, respectively, have a non-uniform extent in a direction transverse the axis of the line; the outer or inner arms have an extent which varies in the modules of the same line; the outer arms of the same module have different extents; at least one module has two inner arms of different extents; in at least one line, two pluralities of modules are provided, alternating with one another so as to provide a series of a module of a first plurality and a module of the second plurality; at least one module has outer lobes that are disposed at different distances from the axis of the line. Fischell et al. teach that the outer and inner lobes with their outer arms and inner arms, respectively, have a non-uniform extent in a direction transverse the axis of the line (Fig 1 L3); the outer or inner arms have an extent which varies in the modules of the same line (Fig 1 19L and 19M); the outer arms of the same module have different extents (Fig 1 19L and 19M); at least one module has two inner arms of different extents (Fig 1 19S and 19L); in at least one line, two pluralities of modules are provided, alternating with one another so as to provide a series of a module of a first plurality and a module of the second plurality (Fig. 1, as one example: one module begins with Item 24MC and ends at Item 24MU, the next module begins immediately following Item 24MU and encompasses three lobes; again modules can be drawn arbitrarily and similarly, two pluralities can be drawn from the modified Dang stent shown above); at least one module has outer lobes that are disposed at different

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distances from the axis of the line (Fig 1 L3). Regarding claim 16, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Dang's stent to include Fischell et al.'s non-uniform extent. Such a modification would reduce the tendency of flaring outward when the stent is advanced through a curved vessel (col. 5, lines 17-31 of Fischell et al.). Regarding claim 17, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Dang's stent to include Fischell et al.'s varied extent. Such a modification would reduce the tendency of flaring outward when the stent is advanced through a curved vessel (col. 5, lines 17-31 of Fischell et al.). Regarding claim 19, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Dang's stent to include Fischell et al.'s outer arms. Such a modification would reduce the tendency of flaring outward when the stent is advanced through a curved vessel (col. 5, lines 17-31 of Fischell et al.). Regarding claim 21, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Dang's stent to include Fischell et al.'s inner arms. Such a modification would reduce the tendency of flaring outward when the stent is advanced through a curved vessel (col. 5, lines 17-31 of Fischell et al.). Regarding claim 30, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Dang's stent to include Fischell et al.'s two pluralities of modules. Such a modification would reduce the tendency of flaring outward when the stent is advanced through a curved vessel. Regarding claim 34, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to

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modify Dang's stent to include Fischell et al.'s outer lobes. Such a modification would reduce the tendency of flaring outward when the stent is advanced through a curved vessel.

**Claims 18, 22, 32, 33, 35-39, 47-49, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dang (US 5,935,162) in view of Fischell et al. (US 6,540,775) as applied to claim 1, and further in view of Callol et al. (US 2002/0183763).**

Dang and Fischell et al. disclose the invention substantially as claimed as stated above. They do not disclose the outer or inner arms have an extent which varies in the modules disposed along the longitudinal axis of the tubular body of the prosthesis; at least one module having a single inner arm; in at least one line, the pathway is interrupted so as to form an opening in the pattern suitable for the passage of an SDS guide wire; the pathway is interrupted to an extent equal to one module; the pathway is interrupted to an extent equal to five lobes; the pathway is interrupted between two connecting bridges between the line and adjoining lines; the pathway is interrupted in two adjacent lines; the bridge comprises a bridge lobe; the bridge comprises two bridge lobes; the bridge comprises three bridge lobes. Callol et al. teach that the outer or inner arms have an extent which varies in the modules disposed along the longitudinal axis of the tubular body of the prosthesis (Fig. 7A Items 26, 28, and 29); at least one module has a single inner arm (Fig 8 Item 28); the prosthesis comprises lines comprising several pluralities of modules (Fig 7A Item 28 and top line of Item 29); the prosthesis

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comprises three pluralities of modules (Fig. 7B Item 45, Item 34, and the module directly above Item 34); in at least one line, the pathway is interrupted so as to form an opening in the pattern (Fig. 8 Item 40); the pathway is interrupted to an extent equal to one module (Fig. 8 Item 40); the pathway is interrupted to an extent equal to five lobes (Fig. 8 Item 40); the pathway is interrupted between two connecting bridges between the line and adjoining lines (Fig. 8 Item 40); the pathway is interrupted in two adjacent lines (Fig. 8 Item 40); the bridge comprises a bridge lobe (Fig. 21 Item 33); the bridge comprises two bridge lobes (Fig. 21 Item 33); the bridge comprises three bridge lobes (Fig. 21 Item 33); a variation of the cell perimeter is provided along the longitudinal axis of the prosthesis (Fig. 7A Item 28). Regarding claim 18, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Dang's stent to include Callol et al.'s varied extent. Such a modification would allow the stent to be placed in a bifurcated vessel and cover the main vessel and a portion of the side branch vessel. Regarding claim 22, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Dang's stent to include Callol et al.'s single inner arm. Such a modification would allow for the passage of a balloon. Regarding claim 32, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Dang's stent to include Callol et al.'s pluralities of modules. Such a modification would allow the stent to be placed in a bifurcated vessel and cover the main vessel and a portion of the side branch vessel. Regarding claim 33, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Dang's stent to

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include Callol et al.'s three pluralities of modules. Such a modification would allow the stent to be placed in a bifurcated vessel and cover the main vessel and a portion of the side branch vessel. Regarding claims 35-39, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Dang's stent to include Callol et al.'s interruption. Such a modification would allow for the passage of a balloon. Regarding claims 47-49, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Dang's stent to include Callol et al.'s bridge lobes. Such a modification would enhance the flexibility of the stent. Regarding claim 54, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Dang's stent to include Callol et al.'s variation of cell perimeter. Such a modification would allow the stent to be placed in a bifurcated vessel and cover the main vessel and a portion of the side branch vessel.

**Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dang (US 5,935,162) in view of Fischell et al. (US 6,540,775) as applied to claims 1 and 41, and further in view of Moore (US 2002/0065547).**

Dang and Fischell et al. disclose the invention substantially as claimed as stated above. They do not disclose the line axis is inclined to the longitudinal axis at an angle of between 5 degrees and 45 degrees and preferably between 10 and 30 degrees. Moore teaches the line axis is inclined to the longitudinal axis at an angle of between 5 degrees and 45 degrees and preferably between 10 and 30 degrees (Fig 1 a line

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forming a pathway motif can be defined by the two points 40 and 15. Its inclination is about 30 degrees). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Dang's stent to include Moore's angle. Such a modification would give the stent superior flexibility characteristics.

**Claims 55 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dang (US 5,935,162) in view of Fischell et al. (US 6,540,775) as applied to claim 1, and further in view of Ragheb et al. (US 6,299,604).**

Dang discloses the invention substantially as claimed as stated above. Dang does not disclose the prosthesis comprises an external or internal coating; the coating comprises a drug. Ragheb et al. teach the prosthesis comprising an external coating (col 3, lines 6-18) and the coating comprising a drug (col 3, lines 6-18). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Dang's stent to include Ragheb et al.'s drug coating. Such a modification would allow a drug to be applied at the site of injury.

#### **(10) Response to Argument**

Appellant has argued on page 4 of the appeal brief that Dang does not disclose the limitations identified by letters e, g, i, j, m and n in the Summary of Claimed Subject Matter. Examiner respectfully disagrees. It has been described in detail above how those limitations are met by Dang. Examiner has only proposed modifying Dang in view

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of Fischell et al. to meet the limitations designated by letter "o". Appellant has argued on page 4 of the appeal brief that neither Dang nor Fischell et al. suggest or teach the modifications proposed above. Dang suggests that the length of the bridges can be modified in order to create a suitable combination of torsional stability and longitudinal flexibility (col. 7, lines 28-39). One of ordinary skill in the art would recognize that to modify the length of the bridge members, the points at which they connect may need to be modified as well. Fischell et al. essentially teach how long and flexible bridge members may be arranged on a stent of similar undulating design as Dang's in order to improve longitudinal flexibility, torsional stability (reduced flaring when bending) and reduced crimping diameter without interfering with each other (col. 2, lines 37-50; col. 2, lines 58-63; col. 3, lines 17-23; col. 3, lines 31-36; col. 5, lines 10-14; col. 5, lines 2-9). The only steps that the modification requires are moving the location of the bridge members from one lobe to an adjacent outer lobe, repeating this step for each module and altering the length and flexibility of the bridges. Appellant has argued throughout pages 4-6 of the appeal brief that the above modifications would require hindsight analysis in view of Appellant's invention. Examiner respectfully disagrees and believes that with the suggestions and teachings set forth above, the proposed combination could reasonably result from an analysis of Dang and Fischell et al. alone.

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**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Thomas McEvoy/  
Examiner, Art Unit 3731

Conferees:

/Anhtuan T. Nguyen/  
Supervisory Patent Examiner, Art Unit 3731

/Thomas C. Barrett/  
Supervisory Patent Examiner, Art Unit 3775