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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* WILLIAM RICHARD DUBRUL and RICHARD E. FULTON

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Appeal 2014-008621  
Application 10/943,121  
Technology Center 3700

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Before DEMETRA J. MILLS, ERIC B. GRIMES, and ERICA A. FRANKLIN, *Administrative Patent Judges*.

MILLS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134. The Examiner has rejected the claims for obviousness. We have jurisdiction under 35 U.S.C. § 6(b).

WE AFFIRM.

STATEMENT OF CASE

The Specification discloses that

[T]he instant invention relates to an improved device for the removal of tissue or foreign bodies from the body. One particular use of this improved device is removal of obstructions from the tubular channels of the body. These obstructions are usually blood clots (thrombi) or other byproducts of occlusive vascular disease (e.g.,

plaque) or even instruments/implants lost by the physician during an intervention including but not limited to wires, stents, staples, components, embolic coils, etc. Further, the removal of matter from non-vascular channels is disclosed.

Spec. 1.

The following claims are representative.

1. A method for separating a soft tissue section from a body comprising:

inserting an elongate shaft into tissue adjacent a target tissue section having surrounding tissue, the elongate shaft having a lumen that carries a tubular braid, wherein the tubular braid has a radially compressed state and a radially expanded state;

advancing the tubular braid from the shaft to sever and separate the target tissue section from the surrounding tissue creating a separated target tissue section;

expanding the tubular braid to a radially expanded state as it advances beyond a distal end of the elongate shaft as a result of shortening of the tubular braid caused by longitudinal compression wherein a helix angle of filaments from which the tubular braid is composed increases as the tubular braid expands;

contracting the tubular braid from its radially expanded state to a radially compressed state to enclose the separated target tissue section; and

removing the separated target tissue section from the body while the tubular braid is in its radially compressed state.

3. The method of claim 1, wherein the step of creating a separated target tissue section is accomplished by inserting expandable blades into the tissue adjacent a target tissue section.

4. The method of claim 3, wherein the expandable blades separate the target tissue section mechanically.

10. The method of claim 2, wherein the cutting device is a sharp distal end of the tubular braid, and wherein the target tissue section is separated by rotating the tubular braid.

18. The method of claim 1, further comprising the step of contracting the tubular braid by lengthening the tubular braid as the tubular braid is put into a tensile mode.

19. The method of claim 18, wherein the step of contracting the tubular braid causes further severing of the target tissue section.

*Cited References*

Henrie	US 4,729,763	Mar. 8, 1988
Nakao et al.	US 5,486,182	Jan. 23, 1996
Kieturakis	US 5,643,282	July. 1, 1997
McGuckin, Jr.	US 2002/0019640 A1	Feb. 14, 2002

*Grounds of Rejection<sup>1</sup>*

1. Claims 1–9 and 11–18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over McGuckin in view of Kieturakis.
2. Claim 10 is rejected under 35 U.S.C. §103(a) as being unpatentable over McGuckin in view of Kieturakis and Henrie.
3. Claims 19, 21, 23, and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over McGuckin in view of Kieturakis and Nakao.

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<sup>1</sup> Other rejections set forth in the Final Action dated Dec. 31, 2013, have been withdrawn by the Examiner. Ans. 2.

### FINDINGS OF FACT

The Examiner's findings of fact are set forth in the Final Action at pages 3–11. The following facts are highlighted.

1. An embodiment of Appellants' invention is reproduced below in Figs. 9B and 9C.

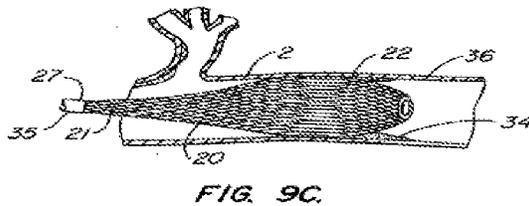
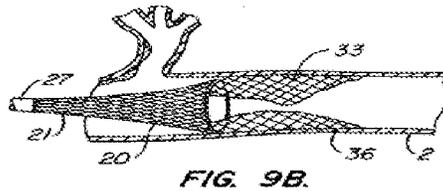


Fig. 9B shows the expandable channel, PYTHON, of the instant invention, as it is being deployed and beginning to engulf the obstruction. FIG. 9C shows the PYTHON expandable channel of the instant invention in its deployed state with the obstruction engulfed within the expanded/deployed channel. Spec. 11.

2. McGuckin, JR discloses a method for separating a soft tissue section from a body comprising: inserting an elongate shaft (202) into tissue adjacent a target tissue section (228) having surrounding tissue (tissue surrounding the tissue section 228), the elongate shaft having a lumen that carries a tubular member (216), wherein the tubular member has a compressed state (Fig. 13) and an expanded state (Fig. 14); advancing the tubular member from the shaft to sever and separate the target tissue section from the surrounding tissue creating a separated tissue section (Figs. 28–30, Figs. 10 and 11, and Paras. [0081], [0082], and [0091]), the tubular member 216 is advanced with cutting elements 214 of the cutting device 206, 214 to the target tissue as shown in Figures 28–30.

Then, the cutting elements 214 of the cutting device 206, 214 on the distal end of the tubular braid separates the target tissue section from the surrounding tissue creating a separat[ed] tissue section as explained in Paras. [0081]-[0086]); expanding the tubular member to a[] radially expanded state as it advances beyond a distal end of the elongate shaft separating the target tissue section (Figs. 1B and 2A); contracting the tubular member from its radially expanded state to a radially compressed state to enclose the separated target tissue section (Para. [0086]); and removing the separat[ed] target tissue from the body while the tubular braid is in its compress[ed] state (Para. [0086]); wherein the step of separating the target tissue section is accomplished by activating a cutting device (combination of 206 and 214) associated with distal end of the tubular member (Figs. 28–30 and Figs. 10 and 11[]), members 206 of the cutting device initially cuts into the body tissue.

Final Act. 7–8.

3. Then, in McGuckin,  
the wires 214 which attached to the distal end of the tubular member are advanced to the target tissue as shown in Figures 28–30. The separating of the target tissue section is completed by activating the wires 214 as shown in Fig 11 and explained in Para. [0081]); wherein the step of separating the target tissue section is accomplished [by] inserting expandable blades (206 and 214) into the tissue adjacent a target tissue section (Figs. 30 and 11); wherein the step of separating the target tissue is accomplished mechanically or using electrosurgery, laser energy, and electrical energy (claims 47–51); removing the target tissue section from the body (Para. 0087]).

Final Act. 8.

4. McGuckin does not disclose “a tubular braid having a radially expanded state and a radially compressed state; wherein a helix

angle of filaments from which the tubular braid is composed increases as the tubular braid expands.” Final Act. 8.

5. Kieturakis teaches a method of removing tissue from the body using a tubular braid (distal portion of sleeve 245, Fig. 15) that has a radially expanded state and a radially compressed state (Figs. 15–16B); wherein the tubular braid expands to a radially expanded state as it advances beyond a distal end of an elongate shaft as a result of a shortening of the tubular braid caused by longitudinal compression (Fig. 15) and contracts the tubular braid by lengthening the tubular braid as the tubular braid is put into a tensile mode (Fig. 16B); wherein a helix angle of filaments from which the tubular braid is composed increases as the tubular braid expands (Figs. 13–15).

Final Act. 8.

6. Figure 10 of McGuckin is reproduced below.

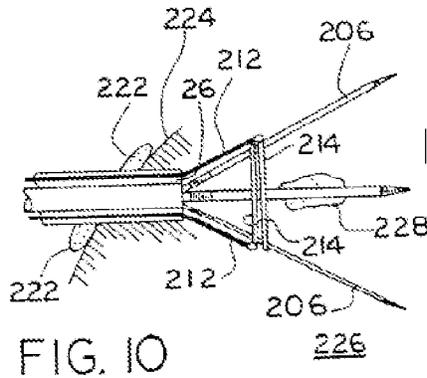
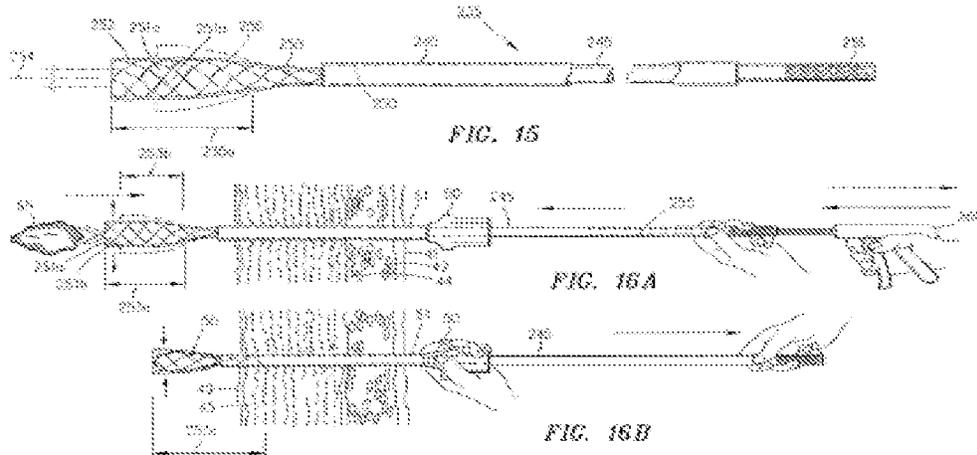


Figure 10 shows a side view of a preferred embodiment of the apparatus of McGuckin, “showing advancement of the cutting wire [214] along a strut [206] margin.” ¶¶ 29; 78.

7. Figures 15, 16A, and 16B of Kieturakis are reproduced below.



Figures 15, 16A, and 16B show sectional views of a patient's abdominal wall illustrating the manner in which a method in accordance with the surgical instrument may be practiced utilizing the tissue-recovery sleeve of Fig. 15. Col. 3, ll. 15–18. The distal portion of the sleeve (245, not shown) is capable of both expanding and contracting in transverse sectional dimension as spiral lead 253a changes. Col. 7, ll. 10-24.

### PRINCIPLES OF LAW

In making our determination, we apply the preponderance of the evidence standard. *See, e.g., Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

“In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness. Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant.” *In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993) (citations omitted).

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007).

“[I]t is the language itself of the claims which must particularly point out and distinctly claim the subject matter which the applicant regards as his invention, without limitations imported from the specification. ... Limitations in the specification not included in the claims may not be relied upon to impart patentability to an otherwise unpatentable claim.” *In re Lundberg*, 244 F.2d 543, 548 (CCPA 1957).

#### *Rejection 1*

We agree with the Examiner’s fact finding, statement of the rejection and responses to Appellants’ arguments as set forth in the Final Action and Answer. We find that the Examiner has provided evidence to support a prima facie case of obviousness. We provide the following additional comment to the Examiner’s rejection and argument set forth in the Final Action and Answer. Appellants separately argue the claims 1, 3, 4 and 18. Other claims that are not argued, fall with claim 1.<sup>2</sup>

Appellants contend that

As to the rejections based upon McGuckin in view of Kierturakis [sic], the claims require advancing the tubular braid from the shaft to sever and separate the target tissue. McGuckin is not capable of performing this step. While the cutting wires 214 and bag 216 (not a “tubular member”) of McGuckin may

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<sup>2</sup> In our previous Decision addressing the instant application (Appeal 2011-003282, decided March 25, 2013) we affirmed the rejection of a different set of claims over the same prior art.

be attached, this fact does not change the operation of the cutting wires. The wires do not cut as they are advanced from support catheters 212 along support members 206.

Appeal Br. 13. We are not persuaded by Appellants' argument. Figure 10 of McGuckin shows a side view of an embodiment of the apparatus of McGuckin, "showing advancement of the cutting wire [214] along a strut [206] margin." ¶¶ 29; 78. FF 6. The cutting wire is advanced "for cutting circumferential swath . . . in order to separate the target tissue mass from surrounding tissue for excision thereof through the incision." (i.e., severs and separates a tissue mass). ¶ 12. Appellants provide no evidence that the cutting wire of McGuckin does not cut when it advances along the strut margin.

Appellants argue that "the support arms of McGuckin are not a tubular braid advanced to sever tissue as required by the claims." Appeal Br. 14. We are not persuaded. To begin, claim 1 does not require that the tubular braid perform the cutting. Ans. 3. Moreover, this reading of claim 1 is consistent with Appellants' Specification, page 19, which states:

This entrapment [of tissue by the PYTHON expandable channel 22] may be aided by adding energies including, but not limited to thermal, electrical, radio frequency, etc. *or with the aid of a cutting edge on the most distal end 32 of the PYTHON expandable channel.* Further, although not illustrated here, the distal end of the PYTHON expandable channel 32 [sic] may have a mechanism that will close the expanded channel prior to removal. This mechanism may include a mechanism for severing the tissue that is not severed during the pushing forward of the PYTHON as well.

Emphasis added. Thus, in Appellants' invention, it would appear to be a cutting aid, not necessarily the braid, which performs the cutting. The

Examiner relies on Kieturakis not McGuckin for the disclosure of a tubular braid (distal portion of sleeve 245, Fig. 15) that has a radially expanded state and a radially compressed state. FF 5.

Appellants argue that “attempting to replace the bag of McGuckin with the recovery sleeve of Kierturakis [sic] would effectively destroy the operation of McGuckin as McGuckin requires a bag in order to operate as intended.” Appeal Br. 15. We are not persuaded. Appellants have not shown why replacing the bag of McGuckin with the recovery sleeve of Kierturakis would effectively destroy the operation of McGuckin. Both devices capture/bag the tissue mass to be removed, and therefore, function similarly. *See* McGuckin ¶ 12; Kierturakis, col. 7, ll. 45–48.

*Claims 3, 4, and 18*

With regard to claim 3, Appellants argue that, “McGuckin fails to show inserting expandable blades into the tissue adjacent a target tissue section and Kierturakis [sic] does not remedy this shortcoming. Wires 214 and support arms 206 are not blades as defined by Appellants.” Appeal Br. 18. Similarly, Appellants argue that claim 4 “requires the expandable blades separate the target tissue section mechanically. McGuckin fails to show this feature and Kierturakis [sic] does not remedy this shortcoming. Wires 214 and support arms 206 are not blades as defined by Appellants.” *Id.*

We are not persuaded by Appellants’ argument. Ribs or blades are described in Appellants’ Specification, pages 16–17, and depicted in Figures 7A and 7B. The Specification only uses the terms “ribs or blades” with no further description other than that “they could be one or more in number.” *Id.* at 17. We decline to read limitations from the Specification or drawings

into the claims, a practice that the Court of Appeals for the Federal Circuit, our reviewing court, cautions against. *See SuperGuideCorp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) (“Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into the claim limitations that are not part of the claim. For example, a particular embodiment in the written description may not be read into a claim when the claim language is broader than the embodiment.”).

We agree with the Examiner that McGuckin’s “pair of cutting wireloops 214” (McGuckin ¶ 78) meet the broadest reasonable interpretation of “blades,” as recited in claims 3 and 4. *See also id.* at ¶¶ 74–83; Final Act. 8.

With regard to claim 18, Appellants argue that the claim, “requires the step of contracting the tubular braid by lengthening the tubular braid as the tubular braid is put into a tensile mode. McGuckin fails to show this feature and Kierturakis [sic] does not remedy this shortcoming.” Appeal Br. 18.

The Examiner finds that McGuckin discloses “contracting the tubular member from its radially expanded state to a radially compressed state to enclose the separated target tissue section (Para. [0086]); and removing the separating target tissue from the body while the tubular braid is in its compress[ed] state (Para. [0086]).” Final Act. 7.

McGuckin states that

The radially inward force provided on tissue containment bag 216 and target tissue mass 228 contained therein by expandable sheath 230, as tissue containment bag 216 is pulled to the left in FIG. 19, compresses tissue mass 228 into a smaller volume and essentially squashes tissue mass

228 into a longitudinally elongated form for passage through support conduit 202. Application of the radial force to tissue mass 228 reduces the transverse cross-sectional dimension of tissue mass 228 to at least the diameter of support conduit 202 as tissue containment bag 216 is drawn through the funnel-shaped expandable portion 231 of sheath 230 and into the interior of support conduit 202.

¶ 86. Kieturakis teaches

a method of removing tissue from the body using a tubular braid (distal portion of sleeve 245, Fig. 15) that has a radially expanded state and a radially compressed state (Figs. 15-16B); wherein the tubular braid expands to a radially expanded state as it advances beyond a distal end of an elongate shaft as a result of a shortening of the tubular braid . . . and contracts the tubular braid by lengthening the tubular braid as the tubular braid is put in tensile mode.

Final Act. 8. We agree with the Examiner that McGuckin in combination with Kieturakis discloses, “contracting the tubular braid by lengthening the tubular braid as the tubular braid is put into a tensile mode.”

Rejection 1 is affirmed for the reasons of record.

### *Rejections 2 and 3*

Appellants do not argue Rejections 2 and 3 on the merits, but instead rely only on their arguments for Rejection 1. Appeal Br. 18 and 19.

Having found no deficiency in Rejection 1, Rejections 2 and 3 are affirmed for the reasons of record.

### CONCLUSION OF LAW

The cited references support the Examiner’s obviousness rejections, which are affirmed for the reasons of record. All pending, rejected claims fall.

Appeal 2014-008621  
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TIME PERIOD

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

AFFIRMED