

The opinion in support of the decision being entered today was *not* written for publication in and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

*Ex parte* COLIN C.O. GOBLE, FRANCIS E. AMOAH and NIGEL M. GOBLE

Appeal 2007-0565  
Application 10/374,097  
Technology Center 3700

Decided: March 16, 2007

Before ANITA PELLMAN GROSS, JENNIFER D. BAHR and ANTON W. FETTING, *Administrative Patent Judges*.

## FETTING, *Administrative Patent Judge.*

## DECISION ON APPEAL

## STATEMENT OF CASE

This appeal involves claims 1-6, 8-16 and 37-42, the only claims pending in this application. We have jurisdiction over the appeal pursuant to 35 U.S.C.

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2        The Appellants invented a radio frequency electrosurgery system operating  
3        electrosurgical instruments at ultrahigh frequencies (UHF). An understanding of  
4        the invention can be derived from a reading of exemplary claim 1, which is  
5        reproduced below.

1. An electrosurgery system comprising an electrosurgical generator, a feed structure and an electrode assembly, the electrode assembly having at least one active electrode and at least one adjacent return electrode, each of which is coupled to the generator via the feed structure, wherein the generator and feed structure are capable of delivering radio frequency (r.f.) power to the active and return electrodes in lower and upper frequency ranges, the upper range containing frequencies at least three times the frequencies of the lower frequency range, and the generator and feed structure are arranged to deliver r.f. power to the electrodes in the lower and upper frequency ranges simultaneously.

17 This appeal arises from the Examiner's final rejection, mailed September 7,  
18 2005. The Appellants filed a brief in support of the appeal on March 22, 2006, and  
19 the Examiner mailed an answer to the appeal brief on June 21, 2006. A reply brief  
20 was filed on August 21, 2006. An oral hearing was provided on March 6, 2007.

PRIOR ART

23 The prior art references of record relied upon by the Examiner in rejecting the  
24 appealed claims are:

25	Brayshaw	US 3,903,891	Sep. 9, 1975
26	Rosen	US 5,150,717	Sep. 29, 1992
27	Rigby	US 5,254,117	Oct. 19, 1993

3 Ryan US 6,224,593 B1 May 1, 2001  
4 (Jan. 13, 1999)

## REJECTIONS

Claims 1-6, 8-11, 13, 37 and 38 stand rejected under 35 U.S.C. § 103(a) as obvious over Garito, Ryan, Rigby and Appellants' admission that provision of an insulating choke element and of a supply conductor which has a length of an odd<sup>1</sup> number of quarter wavelengths is prior art.

10       Claims 14-16 and 39-42 stand rejected under 35 U.S.C. § 103(a) as obvious  
11 over Brayshaw, Garito, Ryan, Rigby and Appellants' admission that provision of  
12 an insulating choke element and of a supply conductor which has a length of an  
13 odd number of quarter wavelengths is prior art.

14       Claim 12 stands rejected under 35 U.S.C. § 103(a) as obvious over Garito,  
15      Ryan, Rigby, Rosen and Appellants' admission that provision of an insulating  
16      choke element and of a supply conductor which has a length of an odd number of  
17      quarter wavelengths is prior art.

<sup>1</sup> The Examiner has mistyped the word “odd” as “old” in the Answer and in every Office action in the record. The Appellants have never commented on the typographical error. It is clear the Examiner meant “odd” from the use of the claim limitation “odd number multiple” in claim 10. None of the contentions in this appeal rely on this term.

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The Examiner applied Garito to show the application of two frequencies in electrosurgery for cutting and cauterization, Ryan for the selection of the 400MHz-2.5GHz range for electrosurgery, and Rigby for simultaneous application of multiple frequencies in electrosurgery. The Examiner also relied on Brayshaw, Rosen and Appellants' admissions for dependent claims.

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## ISSUES

9 The issue pertinent to this appeal is

- 10     • Whether the art shows delivering r.f. power to the electrodes in the lower  
11           and upper frequency ranges simultaneously.

12 In particular, the Appellants contend that, as to the electrosurgery instruments  
13 in the applied prior art, Garito only selects one frequency (Br. 10); Ryan describes  
14 only a single frequency (Br. 11); Rigby has a multiposition switch that is disclosed  
15 as a two position switch such that only one frequency may be selected at a time  
16 and has no position in which two frequencies are selected simultaneously (Br. 11-  
17 13; Reply Br. 2-5); and that the Appellants' disclosure provides no admission as to  
18 supplying two frequencies simultaneously (Br. 13).

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## 2 FACTS PERTINENT TO THE ISSUES

3 The following findings of fact pertinent to the above issues are supported by a  
4 preponderance of the evidence:

5 Rigby describes prior art electrosurgery devices simultaneously cutting and  
6 cauterizing (col. 1, ll. 25-39).

7 Rigby describes applying a high or low frequency signal to an electrosurgical  
8 instrument

9 An [sic, A] *multi-position electric switch* directs either a low or a high  
10 frequency voltage to an electro-surgical cutting tip in order to cut and  
11 cauterized [sic, cauterize] the tissue in contact therewith. (emphasis  
12 added).

13 (col. 3, ll. 65-68).

14 Electro-cautery cable 14, which connects through the two wires  
15 shown in FIGS. 3-5 to a source of high and low frequency voltage not  
16 shown, electrically communicates with the electro-surgical tip 26  
17 through a dual function electric switch 22 positioned on a side of the  
18 pistol grip 42 and, *by way of example*, having a first switch position to  
19 enable a high frequency voltage to the electro-surgical tip 26 and a  
20 second switch position to enable a low frequency voltage source to the  
21 tip. (emphasis added).

22 (col. 5, ll. 40-49).

23 Rigby describes selecting one frequency to cut and the other frequency to  
24 cauterize (claims 3, 12, 15, 25, 36 and 38).

25 Rigby's Figs. 5, 7 & 8 show the operation of Rigby's multiposition switch as  
26 two pushbutton switches with a rocker arm over the two switches.

Thus, a person of ordinary skill in the art would have immediately envisaged that Rigby's two switches have four possible positions (both on, either one on alone, both off), of which two (either one on alone) or three (either one on alone, both off) are possible with the rocker arm over the switches.

5 Garito suggests the desirability and capacity of combining cutting and  
6 cauterizing by a surgical instrument by combining multiple frequency signals.

That [r.f.] carrier is then pre-amplified in block 48 and inputted to a conventional modulator stage 50. Also input to the modulator stage is a modulating signal 52 derived from a CPU selection signal 54 and a D/A converter 56. The modulations referred to are the different output waveforms used for the known CUT, CUT/COAG, HEMO, and FULGURATE modes. These typically are: CUT-CW (full-wave rectified and filtered) output with maximum average power; CUT/COAG -full-wave rectified but unfiltered, deeply modulated, at 37.5 or 75 Hz rate, envelope with approximately 70% average to peak power ratio;....

17 (col. 3, ll. 47-54).

18        Signal modulation is a form of combining signals. One of the results of  
19      modulation is that, if the result of a signal modulated by another signal is applied  
20      to a point, both of those frequencies are applied to that point.

ANALYSIS

1        We note that the Appellants argue these claims as a group. Accordingly, we  
2 select claim 1 as representative of the group.

3        The above facts show by a preponderance of substantial evidence that Rigby  
4 describes applying one frequency to cut and another frequency to cauterize. Rigby  
5 also teaches that simultaneous cutting and cauterization was known to and desired  
6 by a person of ordinary skill in the art. Rigby describes using two pushbutton  
7 switches mechanically coupled with a rocker arm to apply either of the  
8 frequencies. A person of ordinary skill in the art would have immediately  
9 envisaged all four possible on or off combinations of Rigby's two switches, and  
10 would have provided for all such combinations that were desirable. Garito  
11 describes both the practicality and desirability of mixing multiple frequencies to  
12 blend cutting and cauterizing functions. It would have been obvious to a person of  
13 ordinary skill in the art to have enabled Rigby's multiposition switch to have both  
14 switches on as one of the four modes of connection that would have been  
15 immediately envisaged to achieve the resultant blend of cutting and cauterizing  
16 shown as both possible and desirable by Garito.

17       Thus, the Appellants have not shown that the Examiner erred in the rejection.  
18 Accordingly we sustain the Examiner's rejection of claims 1-6, 8-11, 13, 37 and 38  
19 under 35 U.S.C. § 103(a) as obvious over Garito, Ryan, Rigby and Appellants'  
20 admission that provision of an insulating choke element and of a supply conductor  
21 which has a length of an odd number of quarter wavelengths is prior art.

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23       *Claims 14-16 and 39-42 rejected under 35 U.S.C. § 103(a) as obvious over*  
24 *Brayshaw, Garito, Ryan, Rigby and Appellants' admission that provision of an*

*1 insulating choke element and of a supply conductor which has a length of an odd  
2 number of quarter wavelengths is prior art.*

3 The Appellants have not separately argued these claims, which depend from  
4 the claims whose rejection we sustained, *supra*. Accordingly we sustain the  
5 Examiner's rejection of claims 14-16 and 39-42 under 35 U.S.C. § 103(a) as  
6 obvious over Brayshaw, Garito, Ryan, Rigby and Appellants' admission that  
7 provision of an insulating choke element and of a supply conductor which has a  
8 length of an odd number of quarter wavelengths is prior art.

13 The Appellants have not separately argued these claims, which depend from  
14 the claims whose rejection we sustained, *supra*. Accordingly we sustain the  
15 Examiner's rejection of claim 12 under 35 U.S.C. § 103(a) as obvious over Garito,  
16 Ryan, Rigby, Rosen and Appellants' admission that provision of an insulating  
17 choke element and of a supply conductor which has a length of an odd number of  
18 quarter wavelengths is prior art.

## DECISION

21 To summarize, our decision is as follows:

- 22 • The rejection of claims 1-6, 8-11, 13, 37 and 38 under 35 U.S.C. § 103(a) as  
23 obvious over Garito, Ryan, Rigby and Appellants' admission that provision

of an insulating choke element and of a supply conductor which has a length of an odd number of quarter wavelengths is prior art is sustained.

- The rejection of claims 14-16 and 39-42 under 35 U.S.C. § 103(a) as obvious over Brayshaw, Garito, Ryan, Rigby and Appellants' admission that provision of an insulating choke element and of a supply conductor which has a length of an odd number of quarter wavelengths is prior art is sustained.
  - The rejection of claim 12 under 35 U.S.C. § 103(a) as obvious over Garito, Ryan, Rigby, Rosen and Appellants' admission that provision of an insulating choke element and of a supply conductor which has a length of an odd number of quarter wavelengths is prior art is sustained.

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

AFFIRMED

JRG

1   **OLIFF & BERRIDGE, PLC**  
2   P.O. Box 19928  
3   Alexandria, VA 22320

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