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D E C I S I O N
of 16 December 2005

Case Number: T 1195/01 - 3.4.01

Application Number: 91910238.4

Publication Number: 0528964

IPC: A61N 1/00

Language of the proceedings: EN

Title of invention:
Apparatus for magnetic field therapy

Patentee:
BIO-MAGNETIC THERAPY SYSTEMS, INC.

Opponents:
Muntermann, Axel
VST Variable Signal Therapiegeräte GmbH

Headword:
-

Relevant legal provisions:
EPC Art. 123(2), 123(3)

Keyword:
-

Decisions cited:
G 0001/93, G 0001/03, T 0108/91, T 1018/02

Catchword:
-



Case Number: T 1195/01 - 3.4.01

D E C I S I O N
of the Technical Board of Appeal 3.4.01
of 16 December 2005

Appellant: BIO-MAGNETIC THERAPY SYSTEMS, INC.
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 24 August 2001
revoking European patent No. 0528964 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: B. Schachenmann
Members: R. Bekkering
G. Assi

Summary of Facts and Submissions

- I. The appeal was lodged by the patentee (appellant) against the decision of the opposition division, dispatched on 24 August 2001, revoking the European patent No. 0 528 964. The notice of appeal was received on 24 October 2001 and the appeal fee was paid on the same day. The statement setting out the grounds of appeal was received on 3 January 2002.
- II. Opposition had been filed against the patent as a whole, *inter alia* based on Article 100(c) EPC.
- III. Oral proceedings were held on 16 December 2005.

Reference is made to the following documents:

E11: US-A-3 915 151

E21: Expert opinion of Prof. Dr. Ing. B. Posch, dated
26 September 2000

E23: Webster's Third New International Dictionary,
1986, 3 pages

E24: The New Shorter Oxford English Dictionary, 1993,
3 pages

E25: Webster's New Universal Unabridged Dictionary,
second edition, 1983, pages 74, 1926 and 1927

E28: The New IEEE Standard Dictionary of Electrical & Electronic terms, 5th Edition, The Institute of Electric & Electronic Engineers Inc., New York, 1993, page 1384

E29: Webster's New World Dictionary, 1994, page 1411, "toroid"

E30: Expert opinion of Prof. Dr. Ing. A. W. Koch dated 15 June 2002, filed with the appellant's letter of 21 September 2005

E31: R. Schulze, "Escaping the inescapable - G 1/03 leads out of The Trap", EPI Information, 3/2005, pages 83, 84

IV. The appellant requested that the decision under appeal be set aside and

- that the case be remitted to the first instance for further prosecution due to a procedural violation, or alternatively
- that the patent be maintained as granted (main request), or
- that the patent be maintained in amended form on the basis of:
 - claim 1 according to one of the following auxiliary requests:
 - auxiliary requests 1 to 4 filed on 3 January 2002;

- auxiliary request 5 filed on 16 November 2005 as auxiliary request 1 and renumbered in the oral proceedings;
 - auxiliary requests 6 to 10 filed on 3 January 2002 as auxiliary requests 5 to 9, respectively, and renumbered in the oral proceedings;
 - auxiliary requests 11 to 21 filed on 21 September 2005 as auxiliary requests 10 to 20, respectively, and renumbered in the oral proceedings;
 - auxiliary request 22 filed on 16 November 2005 as auxiliary request 20 and renumbered in the oral proceedings;
- with claims 2 to 7, description and drawings as granted.

Furthermore, it was requested that Prof. A. Koch be allowed to make oral submissions during the oral proceedings.

V. The respondents requested that the appeal be dismissed.

Furthermore, it was requested that the expert opinion (document E30) submitted by the appellant, drafted by Prof. A. Koch, the brother of the appellant's representative, not be admitted in the proceedings since it was filed too late, and that Prof. A. Koch not be allowed to make any oral submissions during the oral proceedings. Moreover, it was requested that the number of auxiliary requests be reduced to a reasonable amount.

VI. Claim 1 of the patent as granted reads as follows:

"1. An apparatus for treating a body organ, the apparatus comprising means for subjecting the body organ to an electromagnetic field, characterized by said means including a toroidal coil (T) which is arranged and dimensioned to receive the body organ in the coil opening and means for driving the coil by a pulsed DC-voltage having a rectangular wave form consisting of an abruptly rising and abruptly deteriorating voltage pulsing at the rate of 1-30 pulses per second, the coil and the driving means being arranged to generate an electromagnetic field in the opening of under 20 Gauss".

Reasons for the Decision

1. The appeal complies with the requirements of Articles 106 to 108 and Rule 64 EPC and is therefore admissible.

2. *Alleged procedural violation*

The decision under appeal (cf. page 4) states that *"the opposition division ascertains in line with the argumentation brought forward by Opponents II and III and supported by standard dictionary as well as E21 that a toroidal coil in its electrotechnical meaning is a doughnut-shaped coil (cf. Websters New World Dictionary 1994)".*

The appellant argued (cf. grounds for appeal, page 3 and 11) that a procedural violation took place in the opposition procedure on the following:

- (a) the document "Webster's New World Dictionary 1994" (document E29) was not annexed to the decision so that the grounds on which the decision was based were not fully reasoned,
- (b) the document was not pre-published, and
- (c) the document had not been previously mentioned in the proceedings.

Regarding the appellant's argument (a), the board finds that annexing of the above document to the decision is unrelated to the issue of the decision being sufficiently reasoned. In particular, Rule 68 EPC does not contain any such requirement. As such, the decision is sufficiently reasoned so that the board sees no procedural violation in this respect.

Regarding argument (b), in the present case the fact that the dictionary referred to was post-published is not considered inappropriate, as it was cited to establish the meaning of the expression "toroidal coil" which as such did not undergo a change in recent times. Furthermore, at any rate the use of a post-published dictionary would not constitute a procedural violation but at the most an error of judgement.

Finally, regarding argument (c), it appears that the above document (E29) was indeed never mentioned before in the procedure. The only "standard dictionary" cited in the procedure was document E28. According to this document, a "toroidal coil" is "*a coil wound in the*

form of a toroidal helix". However, in the oral proceedings (cf. minutes, page 1, point 3) the chairman of the opposition division stated that "*the term "toroidal" coil has a well recognised and unequivocal meaning in the field of electrical engineering, namely a cylindrical coil wound to the shape of a doughnut*". Accordingly the appellant was given the opportunity to provide its comments on the particular meaning of the term "toroidal coil" used against him for the purpose of Article 123(2) EPC in the contested decision. Therefore, the appellant's right to be heard (Article 113(1) EPC) in this respect is not considered to be violated.

Accordingly, although admittedly the reference to document E29 in the decision under appeal represents a shortcoming of the decision, the board sees no procedural violation in the present case which could justify a remittal to the first instance. The appellant's request for remittal is, thus, rejected.

3. *Procedural issues in the appeal proceedings*

In view of the fact that the technical issues addressed in the expert opinion of Prof. A. Koch (document E30) are not considered to be excessively complex, the board has decided to admit document E30 into the proceedings. Furthermore, since the Prof. A. Koch, acting as a party expert on behalf of the appellant, was duly announced in advance of the oral proceedings, he was allowed to make submissions on the relevant technical issues during the oral proceedings under the responsibility and control of the appellant's professional representative.

As far as the number of auxiliary requests filed by the appellant, objected to by the respondents, is concerned, the board has decided to admit all requests in spite of their number, considering that the amendments can easily be understood and represent an attempt to meet the objections raised against claim 1 of the patent as granted, in particular to escape from the trap of Articles 123(2), (3) EPC.

4. *Main request*

4.1 The wording of claim 1 of the main request is in substance based on the wording of the process claims 1, 3 and 5 as originally filed, with the replacement of the "annular coil" by a "toroidal coil" and with the addition that the coil is arranged and dimensioned to receive the body organ in the coil opening.

However, the expression "toroidal coil" as such does not appear in the originally filed application documents.

Thus, the question arises whether the replacement referred to above complies with Article 123(2) EPC.

4.2 The generally acknowledged technical meaning of a "toroidal coil" for a skilled person working in the field of devices for generating electromagnetic fields at issue, is "*a coil wound in the form of a toroidal helix*" (see document E28). According to document E23, the term "toroid coil" is also used to designate the above coil type.

Furthermore, according to documents E23, E24 and E25 a toroid is a surface generated by the rotation of a plane closed curve about an axis lying in its plane and not intersecting it, or the thereby enclosed body.

A toroidal coil provides a magnetic field within the core of the coil with little stray magnetic fields outside the coil. Accordingly, as far as the coil opening referred to in claim 1 for receiving the body organ is concerned, it may be understood to relate to the cavity in the core of the toroidal coil or to some gap between the beginning and the end of the coil.

In fact, as submitted by the respondents, in the technical field at issue of magnetic field therapy, apparatuses are known with a toroidal coil for generating the magnetic field, with an opening in the coil to receive the body organ to be treated so that it is exposed to the dense magnetic flux in the core of the coil.

Accordingly, the term "toroidal coil" in claim 1 as granted has a clear technical meaning for a skilled reader within the context of subject-matter of the claim, namely a coil wound in the form of a toroidal helix.

- 4.3 For the purposes of the decision the technical content of the description is considered in the following.

The originally filed description, in its introductory part relating to the prior art, refers to document E11 held to disclose "*the idea of imparting a low frequency AC source to a wound toroid into which an ailing limb*

is inserted". Document E11 in fact discloses an arrangement with a substantially cylindrical coil (solenoid coil) and a coil arrangement with a number of flattened cylinder coils producing an axial magnetic field in the respective part of the body (see figures 1 and 2 and corresponding description). A toroidal coil, i.e. a coil wound in the form of a toroidal helix, is not provided.

The subsequent summary of the invention in the originally filed description underlines the importance of the wave form used for driving the electromagnetic field without further specifying the coil arrangement.

In the brief description of the drawings, then, figure 1 is said to be "*a simplified perspective view of a wound toroid energized to develop an electromagnetic field as indicated by flux lines, shown treating a diseased hand*". Figure 2 is said to be "*a front end view with front of cover removed and showing the coil segments inside the toroid*" and figure 3 "*a graph showing the voltage flow vs. time as imparted to the toroid air coil to induce the magnetic field under the invention*". Moreover, figure 6 is said to be "*an enlarged perspective view of the carriage for supporting the toroid*".

Next a "*description of the preferred embodiment*" is given. As stated, "*referring to the drawings, the invention involves the creation of an electromagnetic field F . This field is created by energizing a winding in a toroid T such that the field forms a three-dimensional donut in and about the toroid. The toroid T within its case contains a number of coil segments CS*

spaced by air gaps G as shown in Fig. 2." (see page 4, lines 24 to page 5, line 1). Furthermore, *"after much study, it has been found that it is important that voltage be supplied to the toroid winding in a pattern demonstrated in Fig. 3"* (see page 5, lines 5 to 7). Also, *"inside the toroid housing, as stated, are a series of circularly arranged arcuate segments, of wound coil CS"* (see page 6, lines 2 to 4). Furthermore, an apparatus for torso treatment is disclosed (cf. figures 4 and 5) including a toroid T, *"similar to that disclosed in Figs. 1 and 2"* (see page 7, lines 15 to 18).

It is clear from the drafting of the application documents as originally filed that the description and the drawings relate to one and the same toroid. Furthermore, it is also clear that this toroid is not a toroidal coil, i.e. a coil wound in the form of a toroidal helix, but rather a toroid shaped housing containing a number of coil segments producing some axial field within its central bore. Although it is not apparent how such coil segments could in fact produce the field lines depicted in figure 1, there is nothing to imply that a different coil arrangement would be used in figure 1, or any other figure. Rather, since the same, erroneous, field lines are shown in the prior art arrangement with a number of flattened cylinder coils of document E11 referred to in the introductory part of the description of the application in suit, presumably figure 1 just contains a drawing error taken over from the prior art document E11.

Furthermore, it is clear that where the originally filed application documents, in the brief description

of figure 3, mentions "*the toroid air coil*", nothing but the toroid referred to earlier in the description is meant, there being nothing to suggest that any other coil arrangement, let alone one with a coil wound in the form of a toroidal helix, would be envisaged.

4.4 Finally, according to claim 1 as originally filed the electromagnetic field is generated by an "annular coil". This, however, cannot provide a basis for the provision of a "toroidal coil" as per granted claim 1 either. In this respect it is immaterial whether "annular" and "toroidal" could be considered synonymous, as held by the appellant, as it is clear that the technical terms "annular coil" and "toroidal coil" have different meanings.

4.5 In view of the above, the application documents as originally filed do not disclose a toroidal coil.

4.6 The appellant argued that the expression toroidal coil in claim 1 as granted should not be attributed the narrow technical meaning of a coil wound in the form of a toroidal helix, since it was evident to the skilled reader both from the wording of the claim itself and from the description and drawings that such a coil could not have been meant since it would not produce an electromagnetic field of a therapeutically useful magnitude in the opening. Accordingly, the term "toroidal coil" should be construed in the light of the description and drawings to mean a "toroid housing with windings". As a matter of fact, figures 1 and 2 did not necessarily relate to one and the same embodiment and at any rate suitable arrangements, such as ones consisting of double Helmholtz coils (see document E30),

or of a number of pluggable segments forming together a solenoid type coil, or some other arrangement producing the required axial field would readily occur to the skilled person.

However, as correctly submitted by the respondents, it would not be evident for the skilled person, based on the originally filed application documents, how to reconcile the incomplete and contradictory information in order to obtain a suitable magnetic field, let alone to come up with the double Helmholtz coils (at any rate not producing a field as depicted in figure 1) or the pluggable solenoid segments, for which the originally filed application documents provide no information at all and which cannot be considered a triviality for an average practitioner.

Furthermore, as stated in decision T 1018/02 (point 3.8 of the reasons), the description cannot be used to give a different meaning to a claim feature which in itself imparts a clear technical teaching to the skilled reader. Where an amendment leads to such a claim feature, the description or drawings cannot be used to rule out the imparted teaching if it is inconsistent with the original disclosure. Such an amendment introduces subject-matter which extends beyond the content of the application as filed and is, therefore, inadmissible (Articles 100(c), 123(2) EPC). This is all the more true where the description and drawings do not provide an unambiguous and clear teaching, as in the present case.

As submitted by the respondents, where a claim as such makes technical sense to the skilled reader, third

parties should be able, for the sake of legal certainty, to rely on what the granted claim states.

4.7 Accordingly, claim 1 as granted contains subject-matter extending beyond the content of the application as filed (Articles 100(c) and 123(2) EPC).

5. *First auxiliary request*

In claim 1 of the first auxiliary request, having regard to claim 1 as granted, the term "*toroidal coil*" has been replaced by "*annular coil*".

A basis for this amendment is to be found in originally filed claim 1, so that the requirement of Article 123(2) EPC is met.

The appellant submitted that the amendment of a granted claim to replace an inaccurate technical statement, which is evidently inconsistent with the totality of the disclosure of the patent, by an accurate statement of the technical features involved did not infringe Article 123(3) (see T 108/91 (OJ 1994, 228), headnote).

In the present case, however, the description and drawings do not provide a clear and consistent teaching as to which specific type of coil is to be used (see point 4.6, *supra*). Accordingly, it is in fact not evident that the expression "*annular coil*" offered as replacement is the accurate expression in the present case.

As claim 1 as amended according to the first auxiliary request no longer requires the provision of a toroidal

coil, the amendment extends the protection conferred, contrary to Article 123(3) EPC.

The present case indeed corresponds to the situation of an inescapable trap addressed in decision G 1/93 of the Enlarged Board of Appeal (OJ 1994, 541, point 13).

Granted claim 1 or any amended claim containing the toroidal coil as a feature is inadmissible under Article 123(2) EPC. Any amendment deleting the toroidal coil, on the other hand, extends the protection conferred, contrary to Article 123(3) EPC.

6. *Second auxiliary request*

Claim 1 of the second auxiliary request, having regard to claim 1 as granted, has been amended to include "*a toroidal coil (T) which includes a winding in a toroid (T) such that the field forms a three-dimensional donut in and about the toroid*".

It is, however, unclear how a toroidal coil including a winding in a toroid could produce a field forming a three-dimensional donut in and about the toroid. As discussed above (see point 4.2), in a toroidal coil the magnetic field is confined to the core of the toroidal windings. Claim 1 according to the second auxiliary request, thus, lacks clarity, contrary to the requirement of Article 84 EPC. Furthermore, such subject-matter has not been originally disclosed, so that the amendment infringes Article 123(2) EPC as well.

7. *Third and fourth auxiliary request*

Claim 1 of the third auxiliary request, with respect to claim 1 as granted, has been amended to include "*an annular coil (T) which includes a winding in a toroid (T) such that the field forms a three-dimensional donut in and about the toroid*".

Claim 1 of the fourth auxiliary request, with respect to claim 1 as granted, has been amended to include "*a winding in a toroid (T) such that the field forms a three-dimensional donut in and about the toroid*".

Both claims as amended no longer require the provision of a toroidal coil. Thus, the amendments extend the protection conferred, contrary to Article 123(3) EPC.

8. *Fifth auxiliary request*

Claim 1 according to the fifth auxiliary request has been drafted in substance in accordance with the "double negation disclaimer" concept presented in document E31. As submitted by the appellant, the general idea behind the claim drafting is to remove the undisclosed and limiting technical feature from the granted claim to comply with Article 123(2) EPC and to add a disclaimer disclaiming any extension of the granted scope to comply with Article 123(2) EPC. Such a disclaimer is held to be necessary for purely legal reasons, to have no effect on the technical information of the application and thus to be another example of an allowable disclaimer in the light of decision G 1/03 (OJ 2004, 413) of the Enlarged Board of Appeal.

In claim 1 of the fifth auxiliary request, having regard to claim 1 as granted, the term "*toroidal coil*" has been replaced by "*annular coil*" and the feature "*except apparatus without a toroidal coil (T) which is arranged and dimensioned to receive the body organ in the coil opening*" has been added.

However, the double negation adds up to nothing more than an unduly complicated affirmation requiring the apparatus to have a toroidal coil, so that the claim does not meet the requirements of clarity and conciseness of Article 84 EPC.

Furthermore, by virtue of the double negation, the disclaimer construction actually adds a feature to the claim. Accordingly, there is no basis for the appellant's contention that the disclaimer has no effect on the technical information of the application. As a matter of fact, it adds that the apparatus has a toroidal coil and thus technical information which was not present in the application as originally filed.

Accordingly, also claim 1 according to the fifth auxiliary request contains subject-matter extending beyond the content of the application as originally filed and, thus, infringes Article 123(2) EPC.

9. *Sixth auxiliary request*

Claim 1 of the sixth auxiliary request corresponds to claim 1 as granted with the additional feature "*wherein the toroidal coil (T) comprises a toroid (T) containing in its case a number of spaced coil segments (CS) and means to energise the coil segments*".

A toroidal coil, and all the more one comprising a toroid containing coil segments, has not been originally disclosed in the application (see point 4.5, above). Accordingly, also claim 1 according to the sixth auxiliary request contains subject-matter extending beyond the content of the application as originally filed and, thus, infringes Article 123(2) EPC.

10. *Seventh auxiliary request*

Claim 1 of the seventh auxiliary request corresponds to claim 1 according to the first auxiliary request discussed above with the additional feature "*wherein the annular coil (T) comprises a toroid (T) containing in its case a number of spaced coil segments (CS) and means to energise the coil segments*".

As this claim no longer requires the provision of a toroidal coil, the amendment extends the protection conferred, contrary to Article 123(3) EPC (see point 5, above).

11. *Eight to tenth auxiliary request*

Claim 1 of the eight to tenth auxiliary request corresponds respectively to claim 1 of the second to fourth auxiliary request discussed above, with the addition of the feature "*wherein the toroid (T) contains in its case a number of spaced coil segments (CS) and means to energise the coil segments (CS)*".

In substance the same objections under Articles 84, 123(2) and 123(3) EPC, held against the second to fourth auxiliary request, respectively, apply to these requests.

12. *Eleventh to eighteenth auxiliary request*

Claim 1 of the eleventh to eighteenth auxiliary request corresponds in substance to claim 1 of the third, fourth, second and fifth to ninth auxiliary request, respectively, with the replacement of the expression "*toroid (T)*" by "*toroid (T) housing [sic]*" and of the expression "*winding*" by "*toroid winding*".

In substance the same objections under Articles 84, 123(2) and 123(3) EPC, held against the second to ninth auxiliary request discussed above, apply to these requests.

13. *Nineteenth auxiliary request*

Claim 1 of the nineteenth auxiliary request, having regard to claim 1 as granted, has been amended to include "*a toroidal coil (T) having a toroid housing*" and "*the toroid housing comprising a winding therein such that the field forms a 3D donut in and around the toroid housing*".

Similar to what is held for the second auxiliary request (see point 6, above), it is unclear how a toroidal coil having a toroid housing comprising a winding could produce a field forming a three-dimensional donut in and around the toroid housing. As discussed above, in a toroidal coil the magnetic field

is confined to the core of the toroidal windings. Consequently, claim 1 according to the nineteenth auxiliary request lacks clarity, contrary to the requirement of Article 84 EPC. Furthermore, such subject-matter has not been originally disclosed, so that the amendment infringes Article 123(2) EPC.

14. *Twentieth auxiliary request*

Claim 1 of the twentieth auxiliary request, having regard to claim 1 as granted, has been amended to include "*a toroidal coil (T) having a toroid housing*" and "*the toroid housing comprising therein a number of coil segments spaced by air gaps and forming a winding therein such that the field forms a 3D donut in and around the toroid housing*".

As in substance held against the sixth auxiliary request (see point 9, above), a toroidal coil with a housing comprising a number of coil segments has not been originally disclosed (Article 123(2) EPC). Furthermore, in substance the same objections as for the nineteenth auxiliary request under Articles 84 and 123(2) EPC apply.

15. *Twenty-first auxiliary request*

In claim 1 of the twenty-first auxiliary request (which corresponds to claim 1 of divisional patent EP-B-0 857 494), having regard to claim 1 as granted, the characterising part has been amended to "*b) said means including a winding in a toroid (T) and a driving means for driving said winding in a toroid (T) such that the field (F) forms a three-dimensional donut in and about*

the toroid (T) and is under 20 Gauss in the area of said body organ" and "c) wherein said driving means is adapted for driving the winding in the toroid (T) with a pure DC voltage wave form of a virtually rectangular shape with abruptly rising (c) and falling (d) sides of the waveform comprising sides of a rectangle pulsing at a rate of 1-30 pulses per second".

Since this claim no longer requires the provision of a toroidal coil, the amendment extends the protection conferred, contrary to Article 123(3) EPC (see point 5, above).

16. *Twenty-second auxiliary request*

Finally, claim 1 of the twenty-second auxiliary request corresponds to claim 1 of the twenty-first auxiliary request with the addition of a "double negation disclaimer" as for the fifth auxiliary request "*except apparatus without a toroidal coil (T) which is arranged and dimensioned to receive the body organ in the coil opening*".

As in substance held with respect to the fifth auxiliary request (see point 8, above), the claim lacks clarity (Article 84 EPC) and, since it includes a toroidal coil, contains subject-matter extending beyond the content of the application as originally filed (Article 123(2) EPC) (see point 4.5, above).

17. Accordingly, for the reasons given above, none of the appellant's requests can be allowed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

R. Schumacher

B. Schachenmann