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**Olsen**

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(54) **SURFACE WARMING DIATHERMY APPARATUS AND METHOD**

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

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6,094,599 A 7/2000 Bingham et al.  
6,735,481 B1 5/2004 Bingham et al.  
2004/0044386 A1\* 3/2004 Beens et al. .... 607/101

(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 437 days.

\* cited by examiner

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(57) **ABSTRACT**

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A surface warming diathermy apparatus and method includes an applicator with a first chamber and a second chamber where the first chamber contains a dielectric solution. A primary coil is wrapped around the applicator beginning with the first chamber. A secondary coil is wrapped around the applicator also beginning with the first chamber and a RF energy source connected with the primary coil. The apparatus is tuned to a near resonant state by means of a variable high-voltage capacitor connected to each end of the secondary coil.

(51) **Int. Cl.**  
**A61F 2/00** (2006.01)

(52) **U.S. Cl.**  
USPC ..... **607/101**

(58) **Field of Classification Search**  
USPC ..... 607/96, 100, 101  
See application file for complete search history.

**20 Claims, 1 Drawing Sheet**

