Implantable Electronic Bone Growth Stimulator
Method and Apparatus for Healing Complicated Fractures in Areas of Physical Stasis

CLAIMS:

• An apparatus for treating damaged cathedral bone and surrounding tissue
• Implantation of an absorbable bioactive substrate onto the surface of bone and surrounding tissue
• Dissolvable electrodes provide microcurrents via a controller to the bone and surrounding tissue
• Electrodes connected to a port disposed at a skin surface or outside of the patient

OVERVIEW:

Injuries to the skull and face that require surgeries to modify, remove, or support bone structures do not always heal correctly or in a timely fashion. This results because of the unusual state of stasis, relative to bone structures in other parts of the body, that these bone structures must remain in during the recovery process.

The Implantable Electronic Bone Growth Stimulation technology is a method and apparatus that can treat damaged tissue in areas of physical stasis. The apparatus is comprised of a substrate patch, a controller device, multiple micro-scale electrodes, and a power supply.

NOVELTIES:

• Treats damaged tissue in areas of physical stasis
• Works by implanting a material that is comprised of multiple electrodes that provide controlled microcurrent stimulation

ADVANTAGES:

• Provides a minimally invasive method to heal, repair, and remediate cranial (cathedral) bone trauma at an accelerated rate

MARKET TRENDS:

Market trends show growth in the sales of electrical stimulation devices. A North American study of bone stimulation therapy usage shows about 45 percent of those surveyed used bone stimulation therapies as part of their treatment for complicated fractures.

INVENTOR(S) EXPERTISE

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