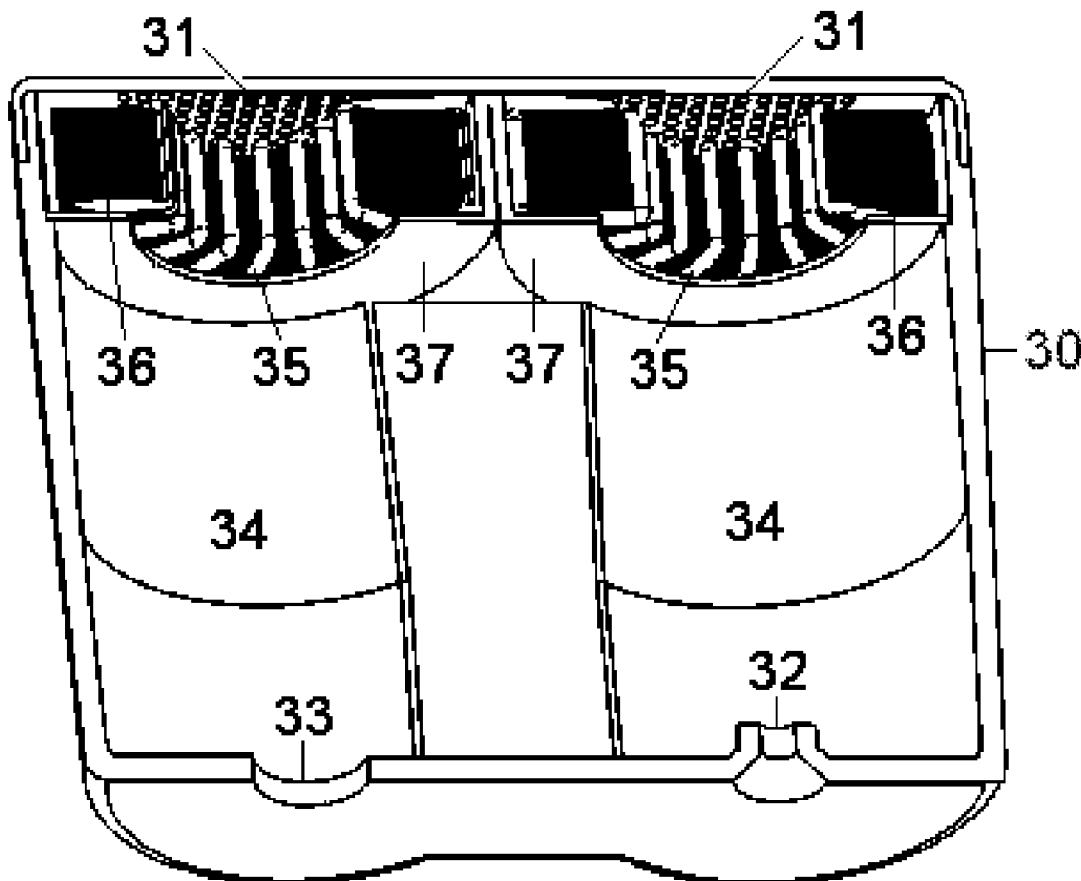




US 20110190569A1

(19) **United States**(12) **Patent Application Publication**
Simon et al.(10) **Pub. No.: US 2011/0190569 A1**(43) **Pub. Date: Aug. 4, 2011**(54) **NON-INVASIVE METHODS AND DEVICES
FOR INDUCING EUPHORIA IN A PATIENT
AND THEIR THERAPEUTIC APPLICATION**(75) Inventors: **Bruce Simon**, Mountain Lakes, NJ
(US); **Joseph P. Errico**, Warren, NJ
(US); **John T. Raffle**, Austin, TX
(US)(73) Assignee: **ElectroCore, LLC**, Morris Plains,
NJ (US)(21) Appl. No.: **13/024,727**(22) Filed: **Feb. 10, 2011****Related U.S. Application Data**(63) Continuation-in-part of application No. 13/005,005,
filed on Jan. 12, 2011, which is a continuation-in-part
of application No. 12/964,050, filed on Dec. 9, 2010,
which is a continuation-in-part of application No.
12/859,568, filed on Aug. 19, 2010, said application
No. 12/859,568 is a continuation-in-part of applicationNo. 12/408,131, filed on Mar. 20, 2009, which is a
continuation-in-part of application No. 12/612,177,
filed on Nov. 4, 2009.(60) Provisional application No. 61/415,469, filed on Nov.
19, 2010.**Publication Classification**(51) **Int. Cl.**
A61N 1/36 (2006.01)(52) **U.S. Cl.** **600/26; 607/45**(57) **ABSTRACT**

A novel non-invasive magnetic stimulator is used to modulate electrical activity of a patient's vagus nerve. Parameters of the stimulation are selected in such a way as to induce a state of euphoria in the patient. The methods and devices may be used for anesthesia, or to treat insomnia, depression, or premenstrual syndromes. They may be used as substitution withdrawal tools for individuals who otherwise would depend on substances and behaviors to achieve a euphoric state of mind, particularly individuals who abusively consume drugs, alcohol or food, or who exhibit behavioral disorders such as compulsive gambling. The devices and methods may also be used to prevent, manage, or relieve stress.



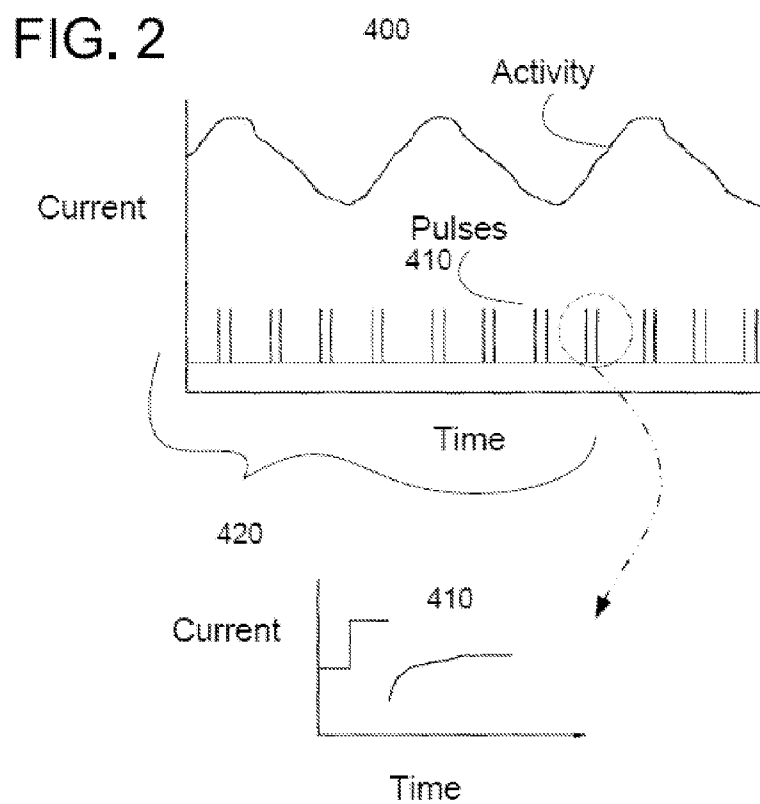
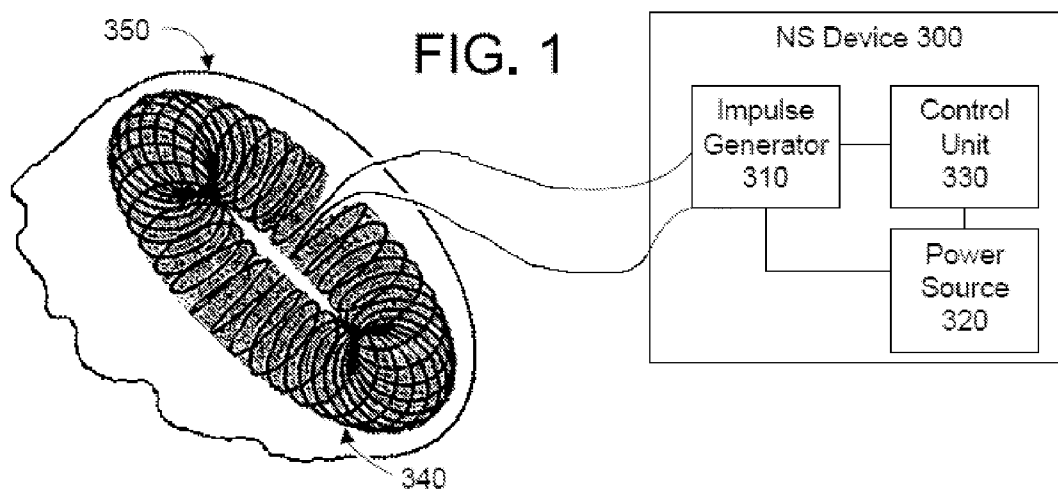


FIG. 3A

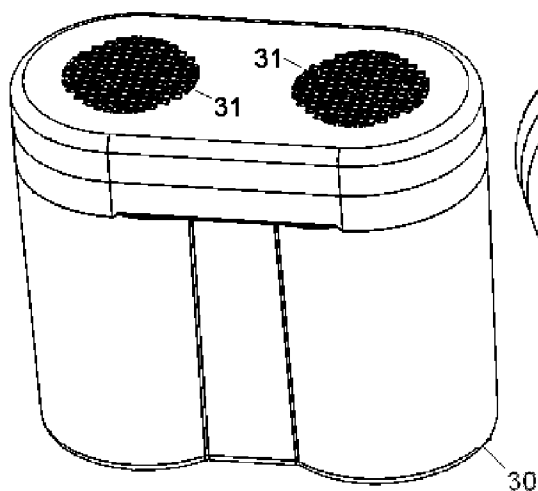


FIG. 3B

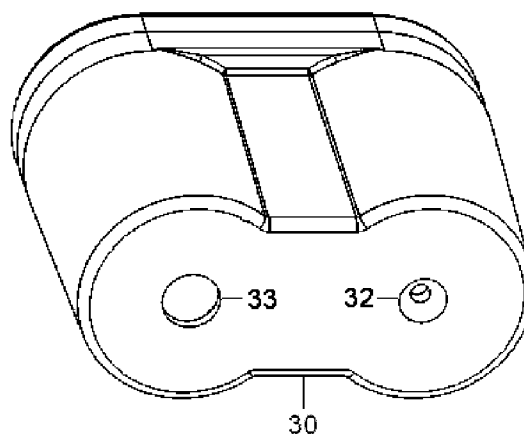


FIG. 3C

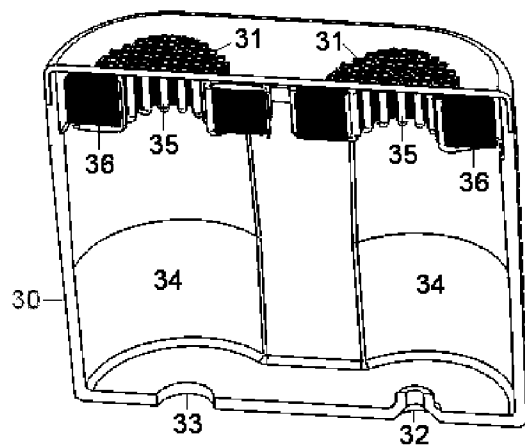
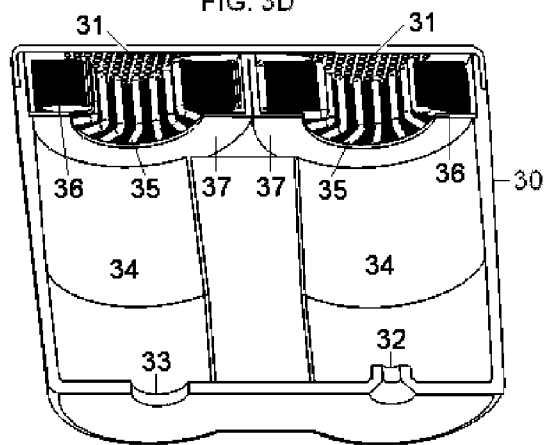


FIG. 3D



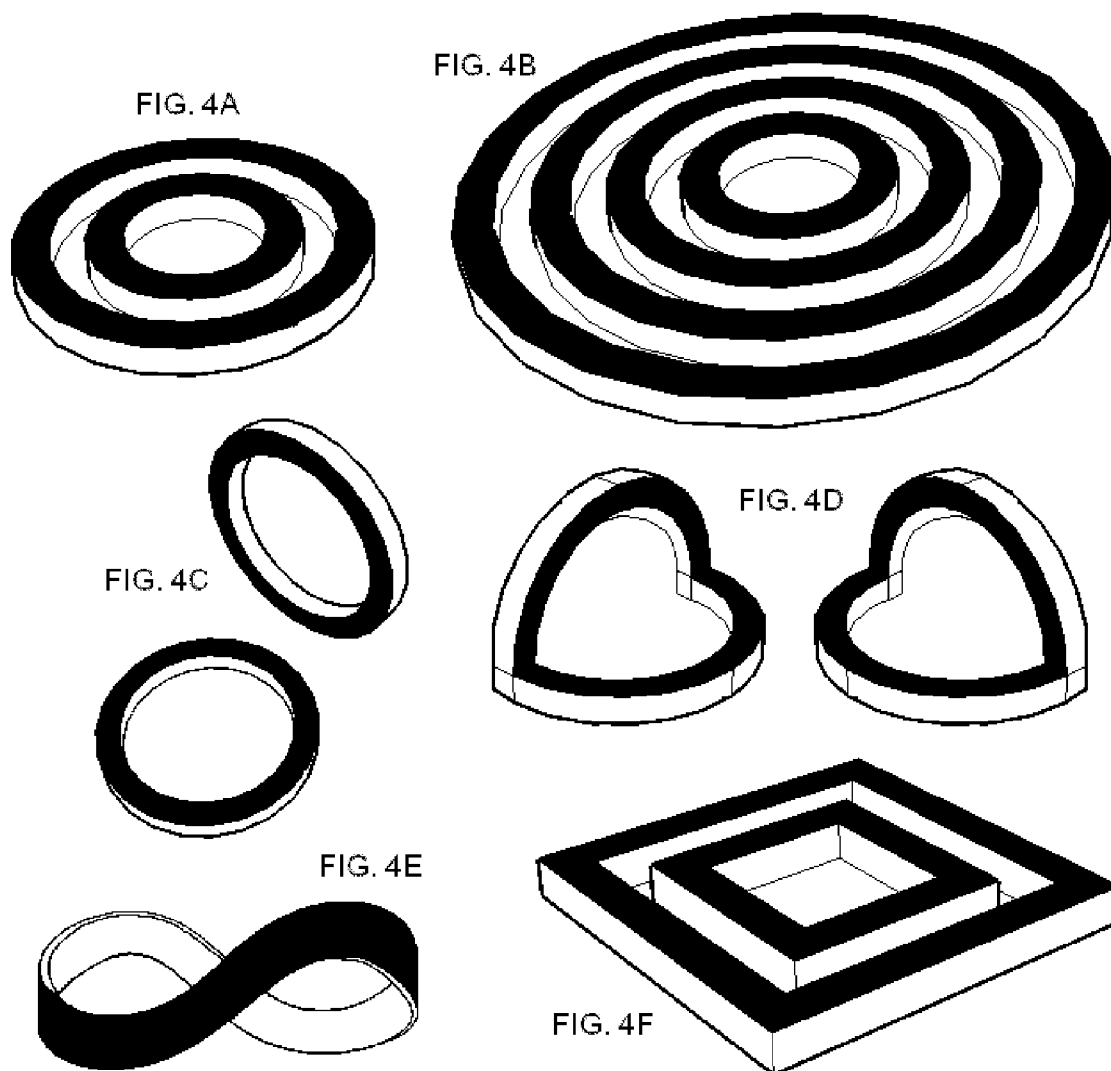
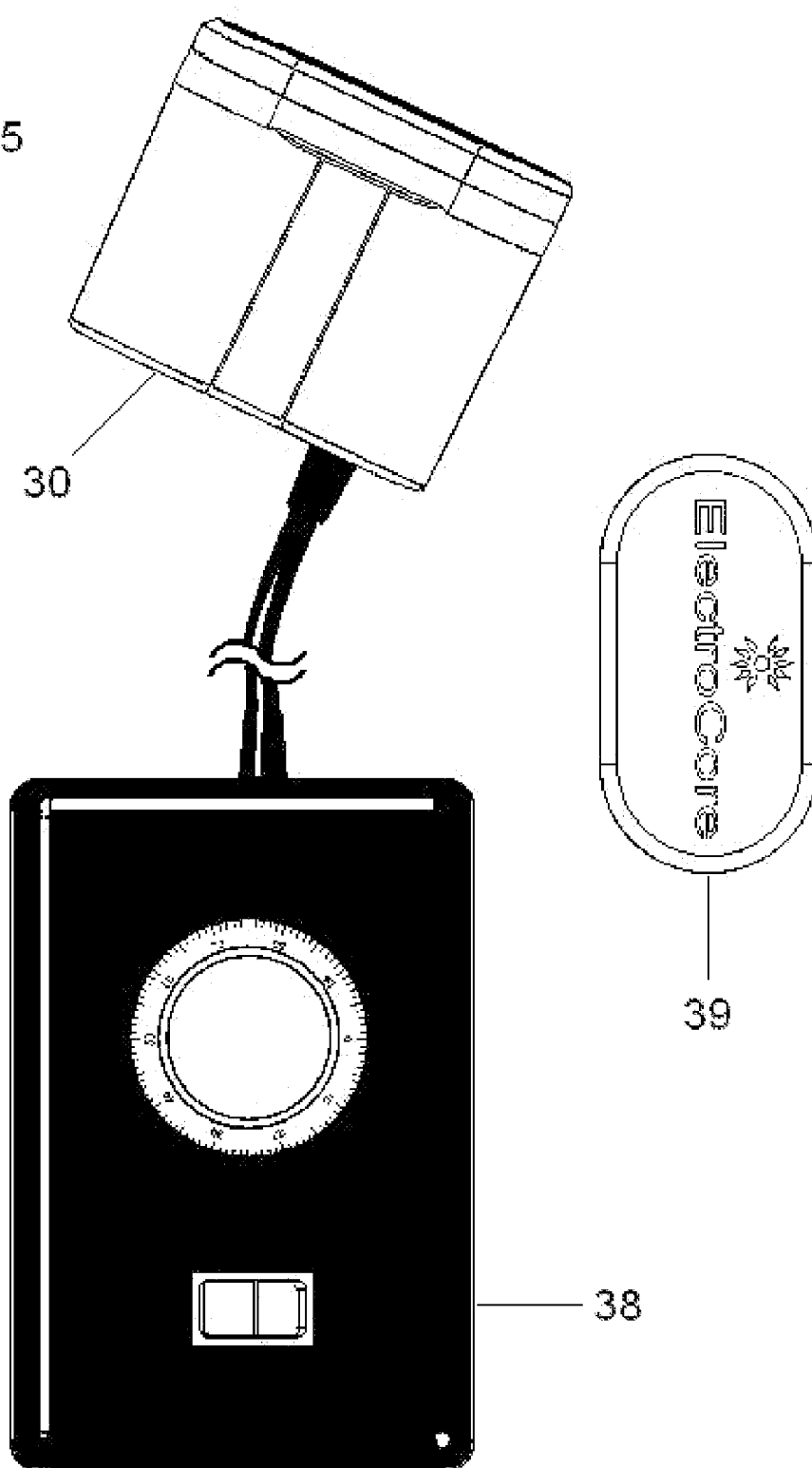


FIG. 5



Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.