Donghyun (David) Seo

Carim-Sanni Sobur

Eric Luu

Radhanath Purakait

Shalih Miah

1. **Patent Number: US20130204315A1**
   1. This is a non-invasive device used to treat patients with Tinnitus.
   2. It is a self-administered device, thus can be used without a therapist present.
   3. The device has a primary and secondary electrode that ensure the stimulation is performed at the right position on the scalp.
2. **Patent number: US8583238B1**
   1. It is a wearable apparatus that aims to be worn during sleep it is not disposable but it is designed for comfort and long term wear as well as usability. It is optimal for patients without hair.
   2. The main selling point is that this device is user operable
3. **Patent number: US20080208287A1**
   1. Non-invasive device which uses two electrodes, one connected to the motor control region of the brain and one connected to a target body region to provide a treatment to neurological disorders.
   2. Treatments last between 20 to 40 minutes with a set electrical pulse at a frequency between 4 and 200 Hz.
4. **Patent number: US20110288610A1**
   1. Mobile device that provides an auto transcranial stimulation that can be regulated and controlled.
   2. The device comprises of a transportable stimulation generator and a current generator with an accessible user interface for selecting different programs.
5. **Patent Number: US8239030B1** 
   1. This device utilizes a full headgear design, it is not cost effective however the design is flexible and could be used to design similarly disposable tdcs devices.
6. **Patent number: US20140148872A1**
   1. Wearable device, it can be self-contained in electrode pads.this is a very good device for hairless skin. It is not disposable and can be complex to use out of the box, has a wide feature set for what is needed. However pad placement is up to the user and makes usability worse
7. **Patent number: US20130079659A1**
   1. Circuit that’s designed to be reusable; electrodes are used to perform both tDCS and EEG, and automatically alternating EEG collection and tDCS application
   2. EEG and tDCS functionalities are integrated into a single headset
8. **Patent number:WO2009137683A2**
9. The device is portable tDCS which is suitable for home or clinical tDCS treatment.
10. It comprises of a chin strap and a mesh portion.
11. It is in form of a hat with a rigid outer shell and flexible outer portion.
12. The placement of the electrodes with respect to the inner surface of the cap is selectively variable.
13. **Patent number: CN107155309A**
14. This device is a head mounted brain therapeutic device with ultrasonic stimulation.
15. Sound field is generated by the 2-D array transducer which performs the stimulation to the focus position.
16. **Patent number: US20140257448**
17. Head wearable brain stimulating device (hat-like design).
18. It contains a pulse generator and two electrodes.
19. Place the patches on desired spots of the head scalp to send an electrical pulse to stimulate the desired part of the brain.

**B**