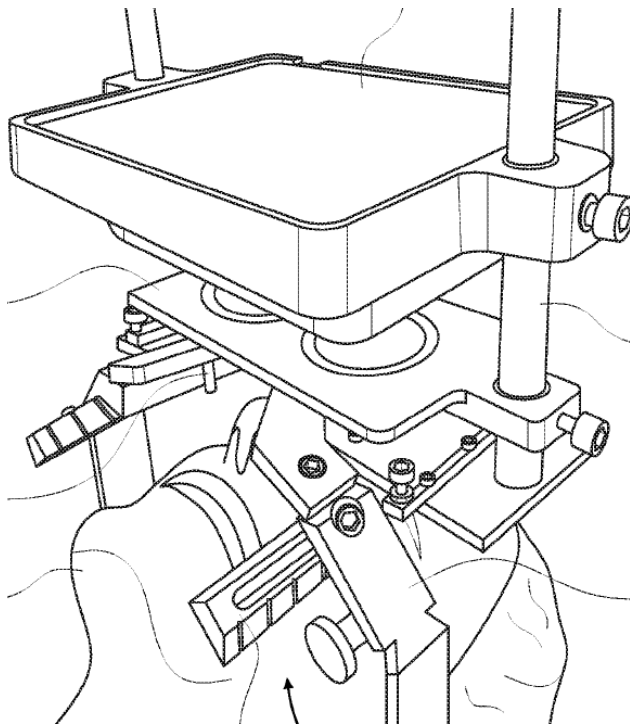


Virtual Reality Add-On Device for Stereotactic Neurosurgery



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Add-on device prototype for enabling use of VR during a stereotactic surgery

Description

Stereotactic neurosurgery combined with neuro-stimulation is a widespread surgical procedure for implanting deep brain stimulation (DBS) electrodes. It is currently difficult to test the behaviour and cognition of patients during awake phase of the surgical intervention, or to provide distraction in the perioperative phases (awake but with the stereotactic frame fixed).

Virtual reality (VR) technologies are known for their ability to immerse patients in an ecologically valid simulation context and to test mood, impulsivity, reaction to stimuli and behaviour for various neurological conditions.

The technology provides an add-on device that can fit a stereotactic apparatus and that allows to use VR with patients during perioperative or awake phases of a neurosurgical intervention.

Advantages

- The invention features a device comprising a VR display adapter specially engineered for intraoperative use during stereotactic neurosurgery.
- The device is designed to fit on the frame of a stereotactic apparatus and can be placed and removed quickly and at any time during surgical operations.
- The device is adjustable per patient (eye-display distance for focus, shape of patient's head) and adaptable to different commercial stereotactic apparatuses.

Applications

- Stereotactic neurosurgery
- Deep brain stimulation, neuro-stimulation

Opportunity

Licensing and/or collaboration