

# Adaptor for Stereotactic Head Frames Improves Medical Image Quality

## Product

Radiographic head frame system

## Indication

Patient head stabilization during imaging

## Value Propositions

- ▶ High degree of adjustability
- ▶ Improved patient experience
- ▶ Enables MRI to yield high quality images
- ▶ Modular design allows device to interface with variety of tables and head frames

## Market

- ▶ \$32.5 billion—Global brain and neuroimaging market (6% CAGR 2021-2025)

## Intellectual Property

- ▶ US Patent Issued\*
- ▶ Available for licensing

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## Background on CU3483D

Medical imaging, such as Computed Tomography (CT), Magnetic Resonance Imaging (MRI), and Positron Emission Tomography (PET), requires that patients be precisely positioned and remain absolutely still to allow accurate capture of a desired image. While remaining motionless is difficult enough for most people, the process becomes far more complicated when they suffer from a condition causing tremors or other uncontrolled movements, such as Parkinson's disease.

Systems that prevent movement of the patient's head generally take a one-size-fits-all approach, and allow little-to-no fine-tuning of the subject's head position. Therefore, there is an unmet need for an adjustable positioning device that allows comfortable orientation in a selected position to enable acquisition of stable and accurate images.

## Technical Innovation

Led by Chris Yakacki in collaboration with neurosurgeon Aviva Abosch, University of Colorado researchers have developed an adjustable adaptor (figure, below) that securely and comfortably prevents patient head movement during an MRI scan. By interfacing with the MRI table, the customizable adapter can be adjusted along the length of the table, along the vertical axis, and rotationally to optimize both patient comfort and data capture during the fitting procedure. Additional benefits to the adaptor include:

- Reductions in appointment time, saving hospital resources.
- Integration with a variety of stereotactic head frames and tables due to modular design of adaptor.
- Improved patient outcomes. Clean brain images are essential for the success of subsequent procedures that require accurate electrode placement.

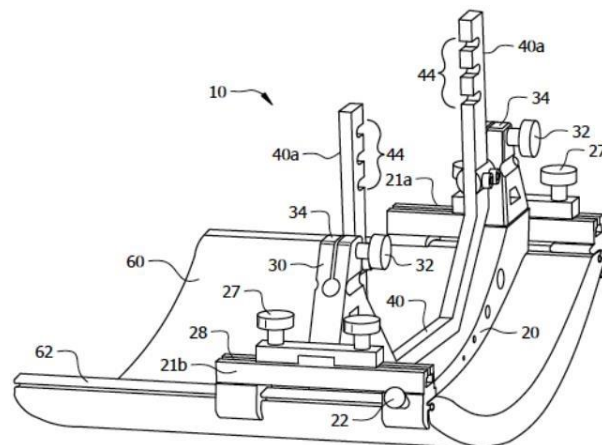


FIG. 6

Figure: Schematic of the modular adaptor secured to an MRI table.

\*US Patent No. 10,959,687—"Imaging Table-to-Head Frame Adapter"—Issued March 30th, 2021.