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# Assistive Utensil: A Spork for Hand Tremors and Spatial Awareness


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# Assistive Utensil: A Spork for Hand Tremors and Spatial Awareness

Ana Font Hernandez, Jacob Kabariti, and Troy Taylor

## Taken for Granted—The Act of Eating

Tremors make the everyday activity of eating a challenge.

This uncontrollable limb shaking affects a person's nutrition and psychological health (e.g. state of frustration, social withdrawal from the embarrassment of eating in the company of others, etc.)

### Proposal

An utensil that aides with balance, self-reliance, and the mental well-being of individuals suffering from tremors.

### Device Benefits

Interior balance weight to help counter hand/arm shaking.

Enlarged handle to compensate for weak gripping ability.

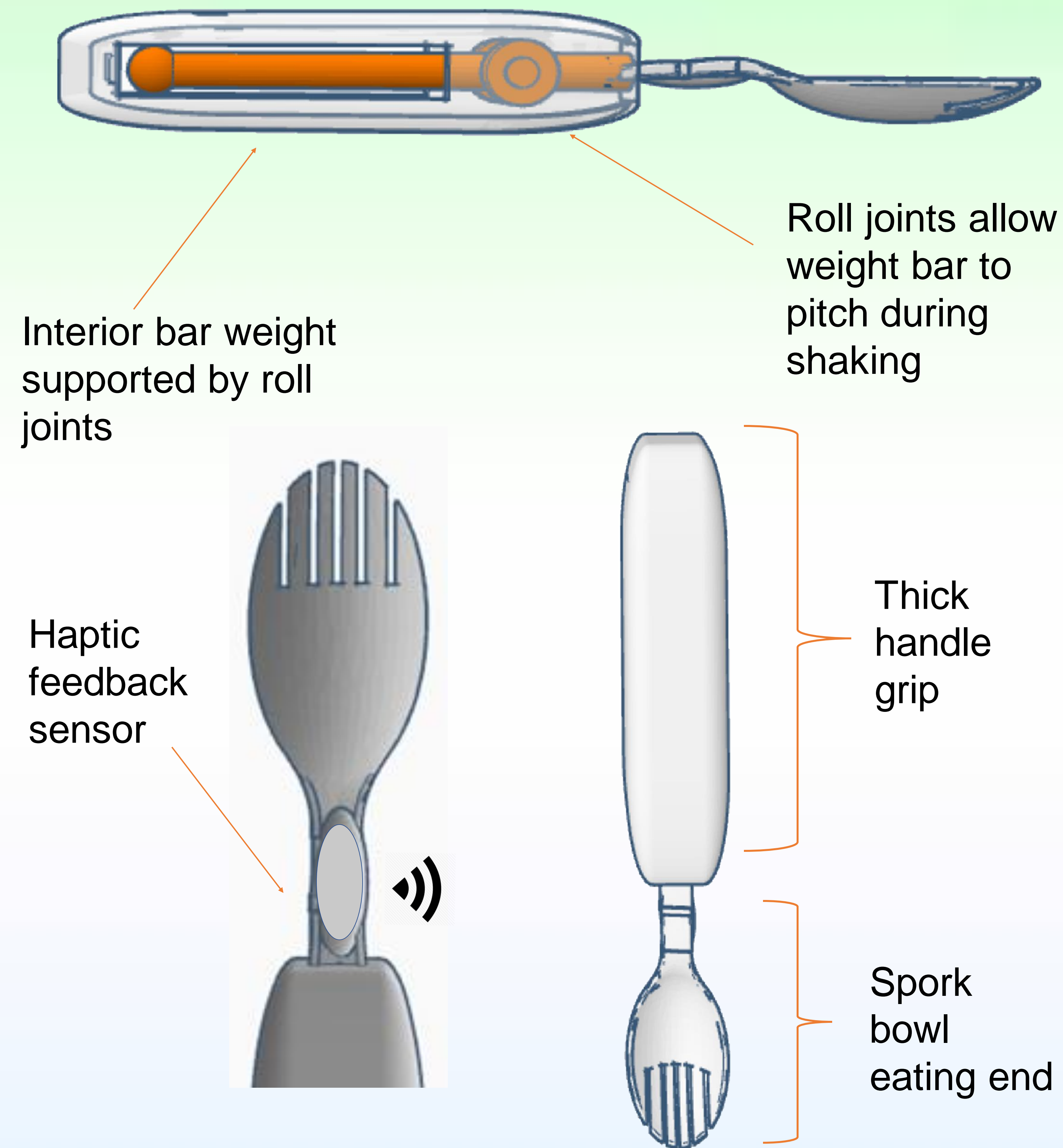
Deep spoon/fork (spork) bowl to accommodate food loss due to tremors.

Spatial sensor with haptic feedback to assist the visually impaired.

### Issues to address



## Design (work in progress)



## Acknowledgments

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## The Issue at Large

Tremors are an involuntary, rhythmic muscle contraction leading to shaking movements.

Tremors can occur on its own or be a symptom associated with a number of neurological disorders such as MS, stroke, Parkinson's, drug withdrawal, etc.

One study estimated that approximately 7 million people in the USA have tremors, and between 0.5 – 1 million have Parkinson's [1]

According to the World Health Organization, an estimated 253 million people live with vision impairment [2]

### The Next Steps

Testing the device with tremor and blind patients.

Finding funds for the project.

### References

- [1] Louis ED, Ottman R. How Many People in the USA Have Essential Tremor? Deriving a Population Estimate Based on Epidemiological Data. Benito-Leon J, ed. *Tremor and Other Hyperkinetic Movements*. 2014;4:259. doi:10.7916/D8TT4P4B.
- [2] Bourne RRA, Flaxman SR, Braithwaite T, Cicinelli MV, Das A, Jonas JB, et al.; Vision Loss Expert Group. Magnitude, temporal trends, and projections of the global prevalence of blindness and distance and near vision impairment: a systematic review and meta-analysis. *Lancet Glob Health*. 2017 Sep;5(9):e888–97.