

Handheld Solid Dispenser Using a Motor-Driven Auger

Background

Solid materials' weighing and dispensing have always been very cumbersome in scientific experiments. Typically, a researcher needs to prepare materials of a similar mass into multiple containers where lots of time and effort are required to perform such chores. In some cases whereby the solid chemical is hazardous, this task can pose a significant safety concern. Presently, solid dispensing technology can only be found as integrated modules in large and costly automated instruments, render it unsuitable for generic lab use.

Abstract

This portable solid dispenser (Fig 1) will help facilitate solid materials weighing. It makes use of a motor-driven auger for solid dispensing with a consistency of more than 97%. The ergonomic design of our prototype allows users to avoid contamination and the smart detachment design can facilitate weighing of different solid materials

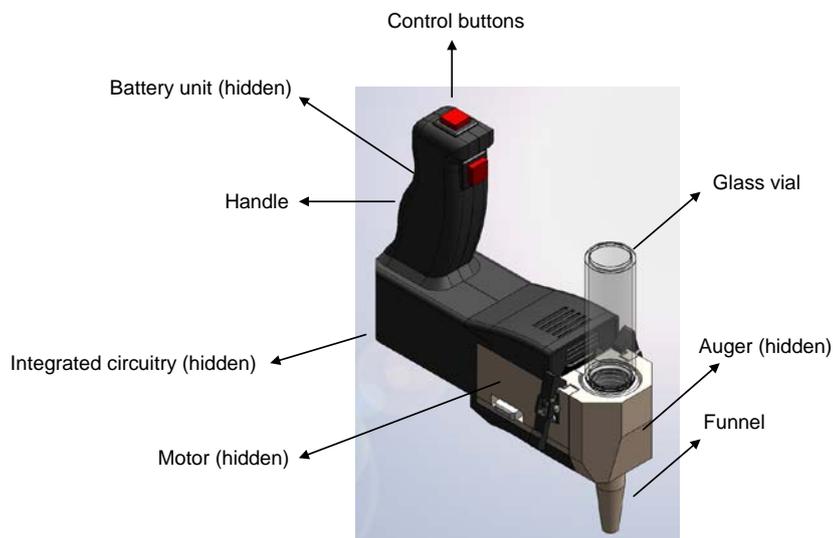


Fig 1: Handheld solid dispenser prototype.

Key Features

- Portable
- Accurate solid dispensing
- Prevent contamination

Potential Application

- Industries ranges from biotechnology, chemical, confectionary, food and defense

Patent

- 1 Patent pending with patent application no: 61/386,672 in US(provisional)

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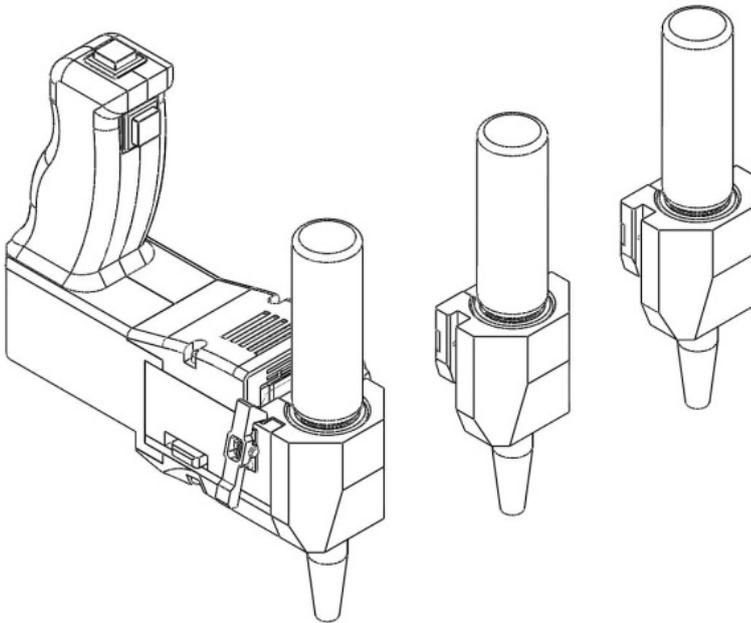
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Disclaimer

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Competitive Advantage

- Motor driven
- Handheld and portability
- Detachable auger-funnel housing that prevents contamination (Fig 2)



*Fig 2:
Interchangeable Module 3s*

Commercialisation Opportunities

- Technology is ready to be commercialized in the market.
- Technology is available for licensing from Singapore Polytechnic.
- Interested companies are invited to submit their plans to Singapore Polytechnic Technology Development Centre (TDC) for exploitation of the technology locally.

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