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FlipDroppy household dispenser for powders and granular food

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Accurate dispensing device for intuitive, spill free use

Background

In the kitchen it is often necessary to measure and distribute powders and granular foods or other substances. This is usually done with scoops or measuring cups, which are challenging to use cleanly.

Technology

The FlipDroppy is a transparent dispensing device for powders and irregularly-shaped granular substances. It can be attached to the opening of screw-cap containers as an alternative storage lid, can make an airtight seal, and involves no moving parts. The dispensing action involves tilting the container to fill an integrated measuring cup (Figure 1, B-C). The accurately-measured food substance can be dispensed by twisting the entire container so that the measuring cup is upside-down, allowing the contents to fall by gravity into a new vessel (Figure 1, D-E).

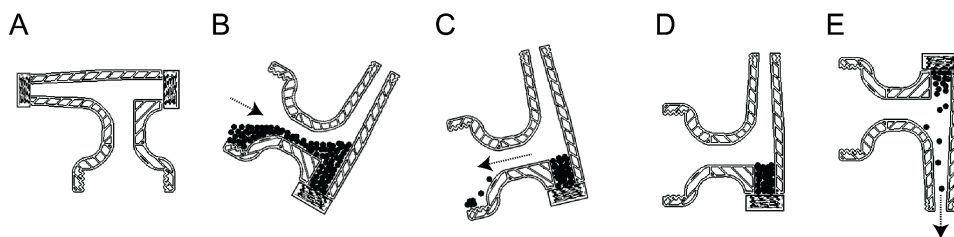


Fig. 1, Mechanism of use | A) The FlipDroppy storage position on top of a storage container. B) The entire unit is tilted with the release pipe facing upward to fill the measurement reservoir. C) The entire unit is tilted the opposite direction to send excess dry substance back into the storage container. D) The correctly measured amount can be observed through transparent walls. E) A 180 degree rotation of the entire unit, including the storage container, along the axis of the shaft inverts the FlipDroppy, allowing the substance to fall through the exit pipe.

The FlipDropdy can be adapted in size and shape for diverse household applications (Figure 2).



Fig. 2, 3D-printed prototypes

LEFT: With a 60 mL measuring cup attached to a 1 L vessel (here with protein powder in position **B** as shown in Fig. 1)

RIGHT: With a 6 mL measuring cup attached to a 250 mL vessel (here with iodized salt in position **E** as shown in Fig. 1)

Figure 2, left: Kitchen stock photo from www.RawPixel.com, photo ID : 3284813 , CC0 public-domain license

Advantages

- Accurate dispensing
- Doubles as a storage lid (hermetically sealable)
- No moving parts (long life, easy cleaning, no jamming, maintenance-free)
- Intuitive, spill-free use
- Can be made from standard materials in any size
- Can be sterilized
- Suitable for mass production, including injection-molding

Patent Information

A patent application has been filed in 2021