

DIY cotton candy maker

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I was talking with Liz at EcoHack3 about sterilized cotton candy microbe project, and this home science project came to my mind for easy to sterilize cotton candy machine.

Mechanism of the machine is really simple. We melt sugar in a soda can which has lots of tiny holes on the side. Then, spin the soda can to blow out melted sugar from tiny holes. The sugar came out of the holes make thin strings of candy.



Materials

- Soda can
- Cardboard box
- Threaded rod (Length : height of the can + 4~5 inch)
- Nuts and Washers

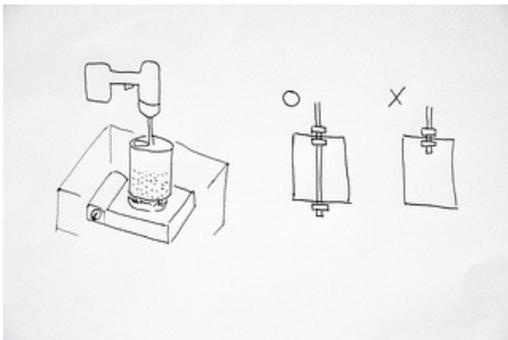
Tools

- Portable Cooktop
- Safety pin
- Power drill



Construction

1. Using safety pin, make tiny holes on lower half of the can.
2. Make holes on the top and bottom of the can for the shaft (threaded rod).



Try to make the holes center of the circle so that two holes lined up straight.

(Note: For top hole take off ring pull and make little notch.)

3. Tie nuts and washers as shown on the image to secure the threaded rod.

(Note: At first, we only tied threaded rod to the top, but it did not have enough strength and ripped the hole after few spin tests.)

4. Attach the top end of threaded rod to the power drill.
5. Using cardboard box, make a wall surrounding the cooktop. Size of the wall may need to be adjusted later.

Candy Making

1. Add sugar into the can
2. Melt sugar in the can over low flame
3. When sugar is melted, turn off the heat and spin the drill

Video by Liz Barry

Version 0 (failed)

We originally tried to use a motor and a AA battery.

Projects I looked up used a rubber tube to connect the shaft and the motor. We did not have rubber tube handy, so we tried epoxy and electric tape ... it failed after 5 seconds of spinning.

Next step

Better recipe for candy??

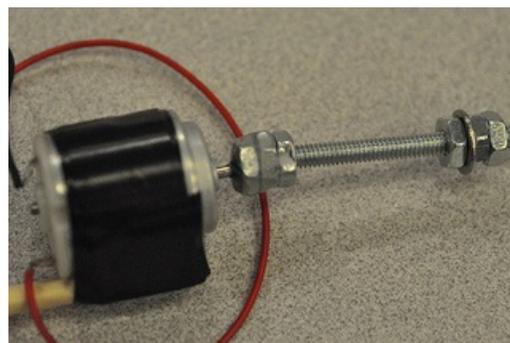
This method worked fine for making cotton candy for eating.

However, on the process of melting sugar it caramelized candy which will cause solution to brown when we dissolve it in water after collecting microbes. Perhaps adopting culinary candy making recipe and pour in non-caramelized candy into the can be better??

Reference websites (Japanese)

<http://www.geocities.co.jp/CollegeLife/9446/wata.html>

<http://www4.ocn.ne.jp/~pami/kagaku04.html>



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