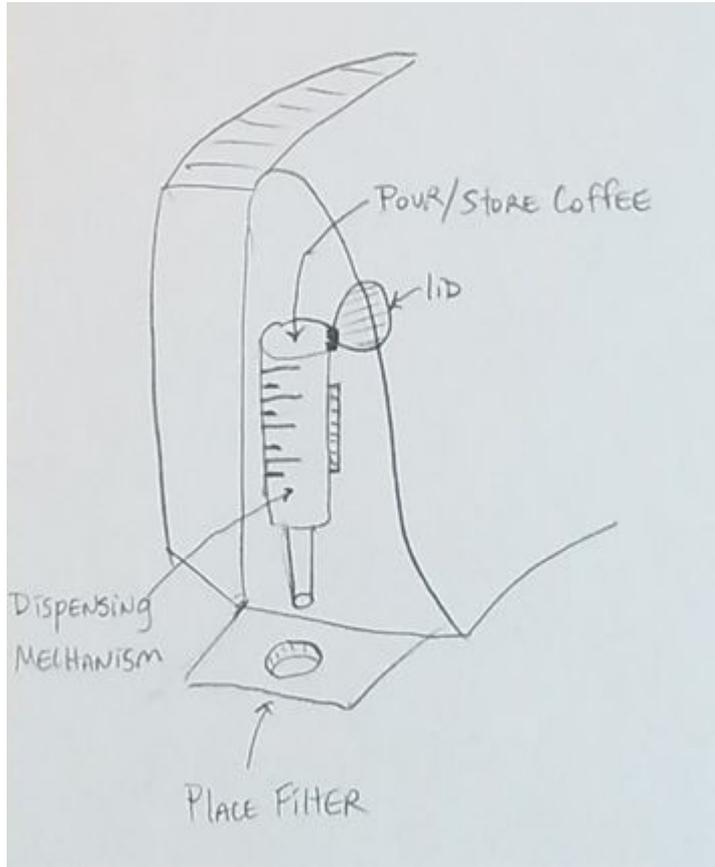


Favorite Ideas

- coffee ground dispenser +
cup cleaner





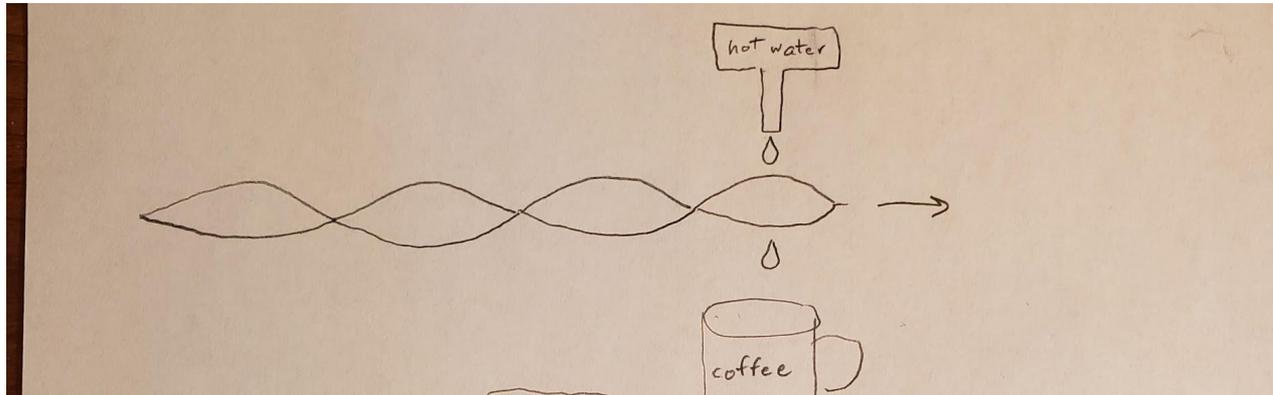
- Trying to still address the issue dealing with the user being able to properly fill the filter with the correct amount of coffee grounds
- On the side of the machine, a dispensing mechanism could be attached
- The mechanism would store coffee ground, have a lid to seal the grounds and keep them fresh, and also have a dispensing mechanism at the bottom
- There would also be a plastic extension piece with a cutout for a filter to be placed when filling with coffee grounds

Coffee Ravioli Belt

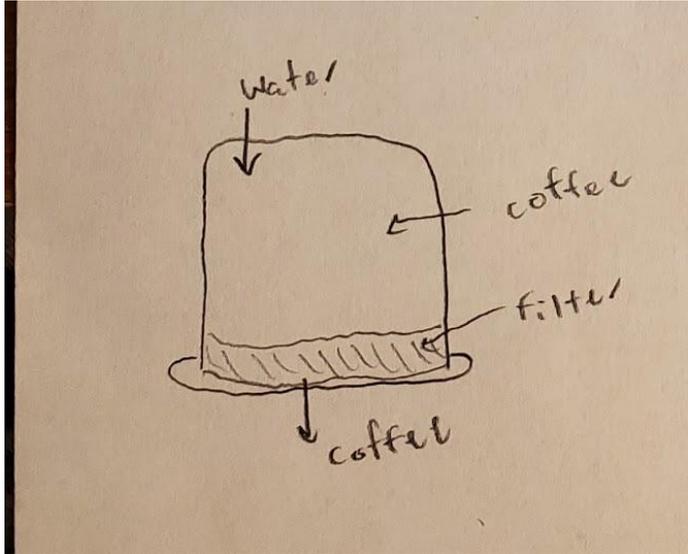
Notes:

String of single serve coffee packets

Serration between packets or motorized drive to automatically move to next packet

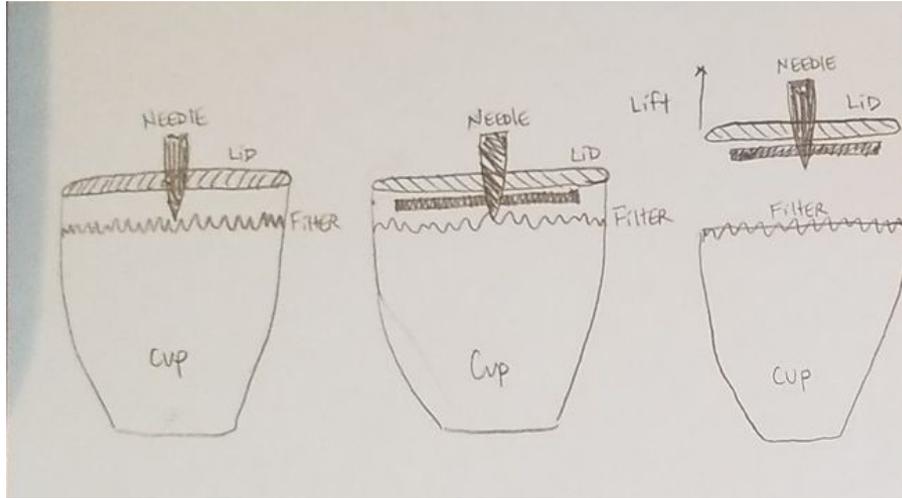


Upside down K cup



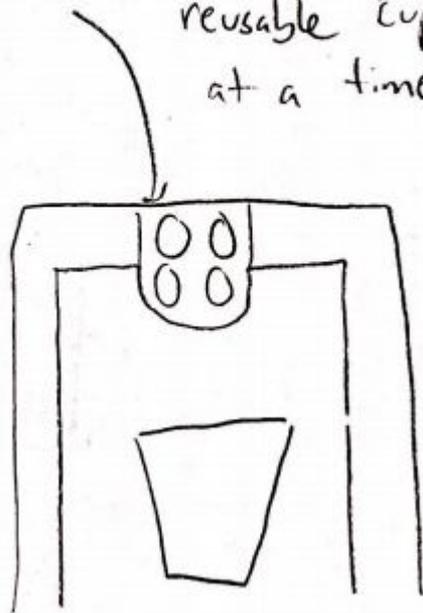
Notes:

Would make filter removal easier, filter attached to foil



- For the current K-cup design, after the coffee making process is over, there is only a single puncture from the needle in the top of the K-cup
- The user has no inclination to separate the top from the K-cup and would rather just dispose of everything still combined
- This idea forces the needle to have a surface that would extend and remove the lid when the the handle is lifted upwards
- This way the lid is separate and the user can see the filter and coffee grounds
- The hope is that the user will throw away the filter/grounds while having more opportunity to recycle the lid and cup

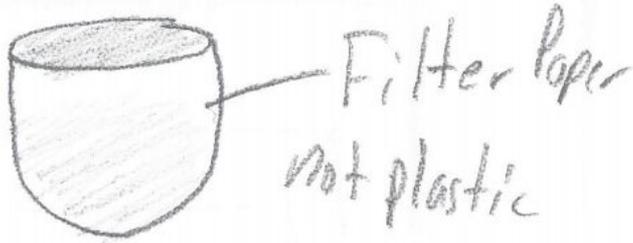
Keurig-like machine that
can handle up to 4
reusable cups
at a time



K-Cup Improvements

Notes: Instead of making the K-Cups out of plastic, make them out of filter paper.

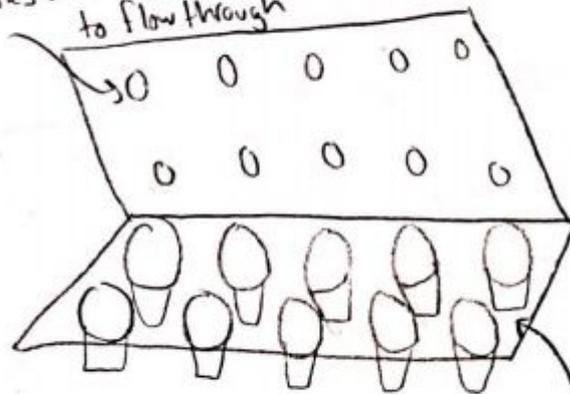
This is a cheap and effective option to make Keurig more sustainable.



End of Favorites ideas

Brainstorming Ideas

holes for coffee
to flow through

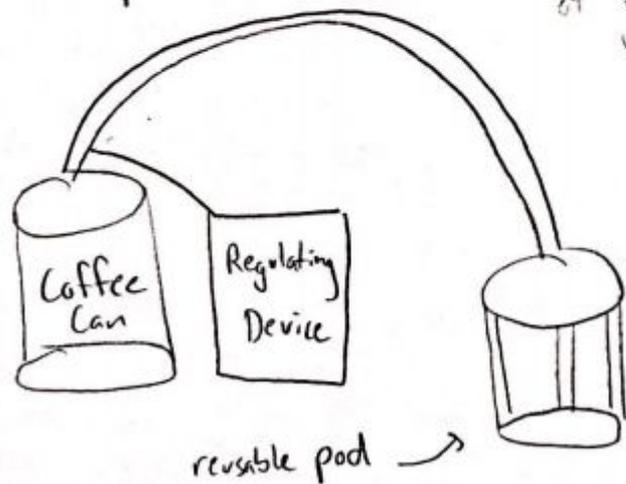


reusable
pads

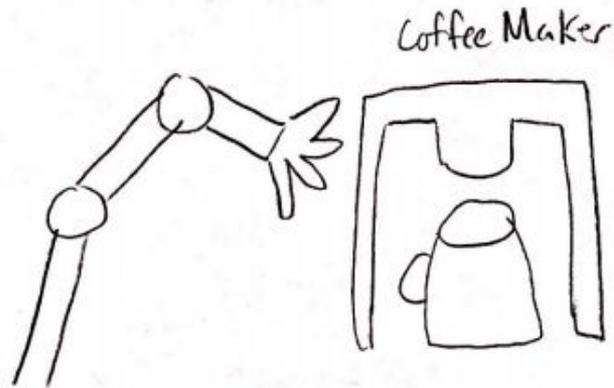


Keurig hooked up to a large tank of water to fill tank. Reusable pods can be used

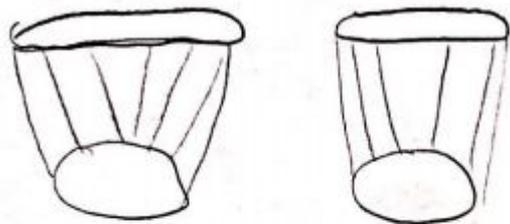
- Regulating Device has buttons for how strong you want your coffee
 - ↳ it then fills the reusable pod with an appropriate amount of grounds



Smart coffee Robotic arm

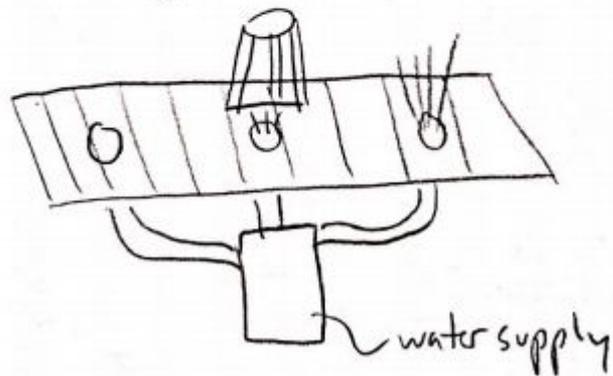


- Robotic hand automatically takes out old filter, puts new filter in and fills it with coffee

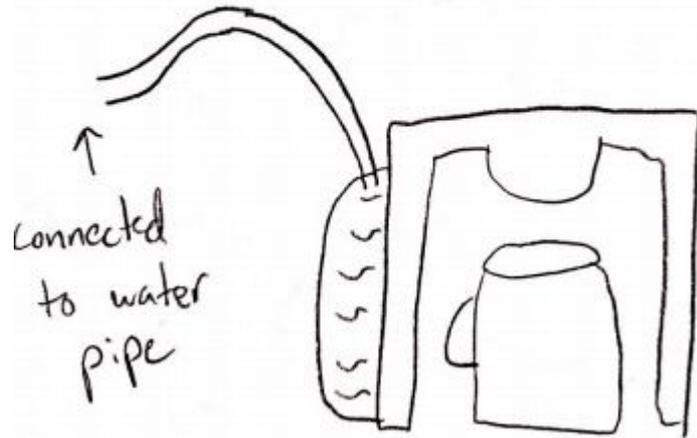


→ These drip coffee filters
can be pre-filled and sealed.
↳ so they are like keurig pods
for drip coffee makers, but
more combustible

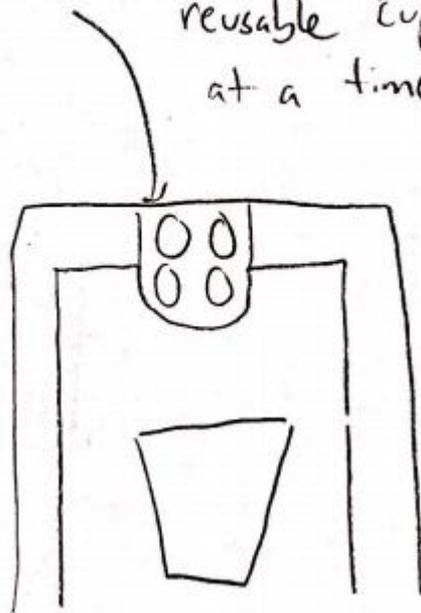
- easy way to clean reusable K-cups fast
 - ↳ functions like a bar glasses cleaner



Drip coffee maker
attached to water supply
in house



Keurig-like machine that
can handle up to 4
reusable cups
at a time



Filter Paper/Coffee Bean Method



Notes: Using the current Keurig machine make minor adjustments to it. Instead of placing a K-Cup inside the machine you would place a filter paper and coffee beans.

Allows you to change the amount of coffee needed and can use whichever coffee you prefer.

Reusable K-Cup Improvements



Notes: Big problem with K-Cups is they tend to overflow. To fix create a machine that will automatically fill the cups with the correct amount of coffee based of how much you want.

This will stop them from overflowing and make it easier for people to use these.

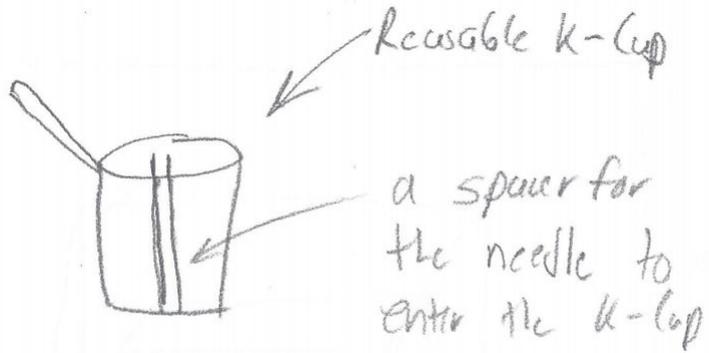
Improvements to the Keurig Machine



Notes: Adding a button to determine the strength of someone's coffee. Strength is associated with the amount of time the water is with the coffee grounds.

These buttons would program the coffee machine to leave the water with the coffee for longer periods of time before releasing it into the mug.

Reusable K-Cup Improvements



Notes: Placing a spacing within the K-Cup will limit the amount of coffee grounds that are in the coffee mug after it's brewed.

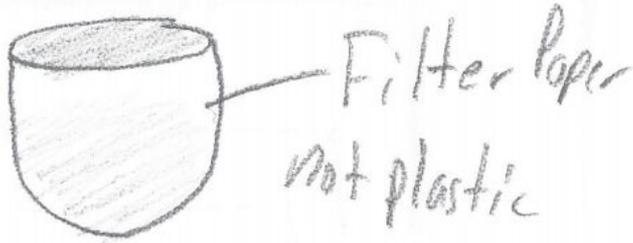
These ground leave the K-cup as the needle pushed through the cup and grounds until it exits the cup.

These spacer will limit this from happening.

K-Cup Improvements

Notes: Instead of making the K-Cups out of plastic, make them out of filter paper.

This is a cheap and effective option to make Keurig more sustainable.



Changing the K-Cup material

Recycling 101: Plastic Codes

Do you know what the numbers on plastic containers mean? The purpose is to identify the type of plastic used on a product. Learn more about the 7 codes (plus one new symbol!) to know how to recycle your plastics.

CODE	PLASTIC TYPE	EXAMPLES	RECYCLABLE?
 1 PETE	Polyethylene Terephthalate	Water Bottle, Soda Bottle, Peanut Butter Container. 	
 2 HDPE	High Density Polyethylene	Milk Container, Shampoo Bottle, Motor Oil Bottle. 	
 3 V	Vinyl	Detergent Container, Clear Food Packaging, Piping. 	 Avoid
 4 LDPE	Low Density Polyethylene	Plastic Food Wraps, Squeezable Bottle. 	
 5 PP	Polypropylene	Yogurt Container, Ketchup Bottle, Syrup Bottle. 	
 6 PS	Polystyrene	Disposable Plates & Cups, Meat Trays. 	 Avoid
 7 OTHER	Other plastics	Baby Bottle, 5-Gallon Water Container. 	 Avoid
	Biodegradable plastics	Bio-based plastic bottles 	 + Compostable

Sources: Nation of Change & Heritage Pioneer
* Symbol used in products manufactured by Cereplast.

Notes: Changing the K-Cup material from plastic number 7 to plastic number 5.

It is the plastic used in ketchup bottles and it is recyclable.

Keurig Improvements



Notes: Creating a coffee maker that can tell which type of pod it is using.

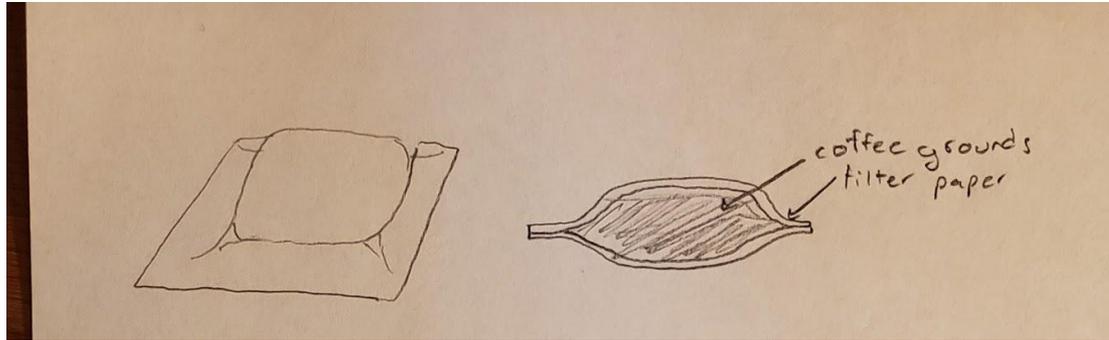
If a Keurig is created that doesn't work with traditional Keurig K-Cups.

If these are widely purchase could help to reduce the amount of K-Cups used because people will need to find new options.

Coffee Ravioli

Notes:

Single serving of coffee between two
filter papers

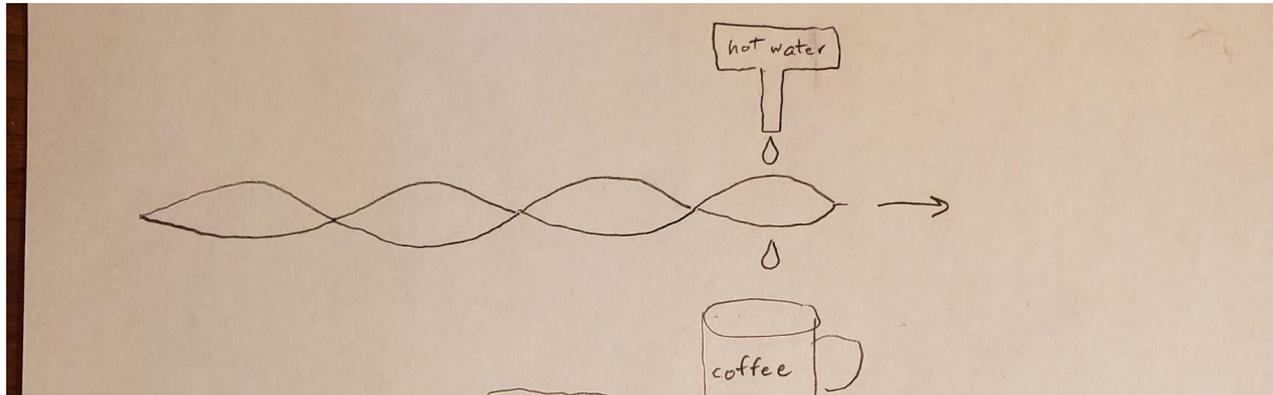


Coffee Ravioli Belt

Notes:

String of single serve coffee packets

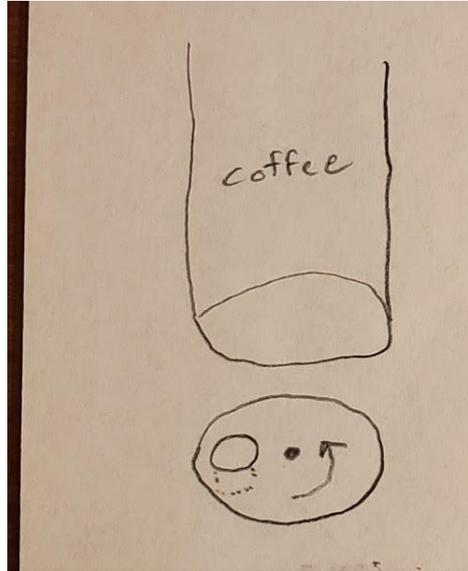
Serration between packets or motorized drive to automatically move to next packet



Coffee Gumball Dispenser

Notes:

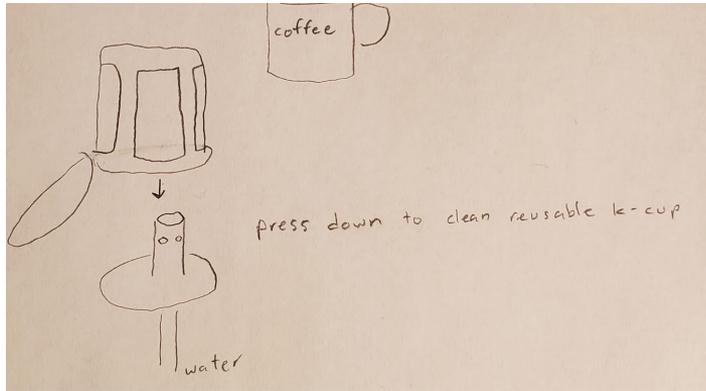
Rotating bottom plate to dispense single serving of coffee into filter paper



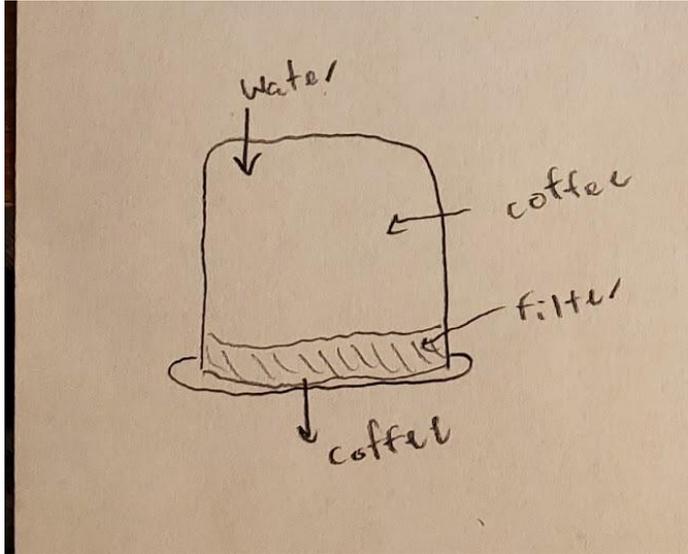
K cup bar glass cleaner

Notes:

Press down to clean out inside of Kcup
or reusable kcup



Upside down K cup



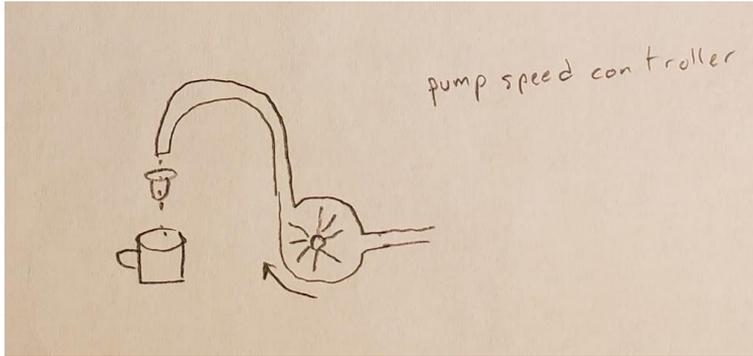
Notes:

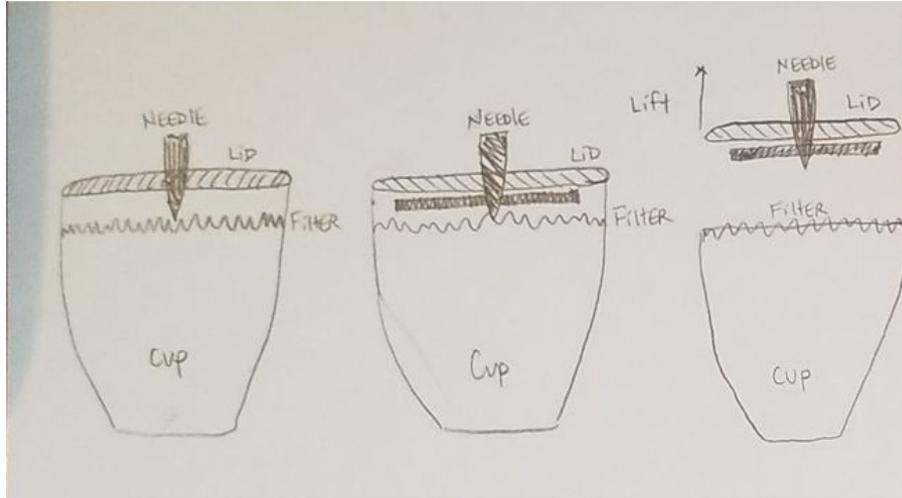
Would make filter removal easier, filter attached to foil

Coffee strength controller

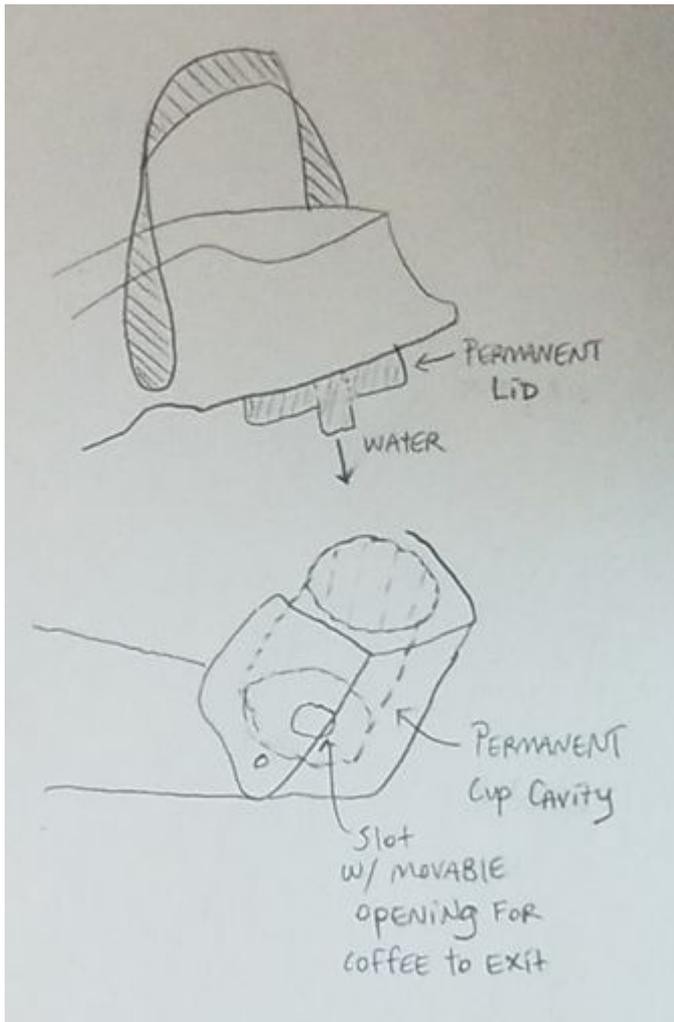
Notes:

Changing flow rate for different coffee strength

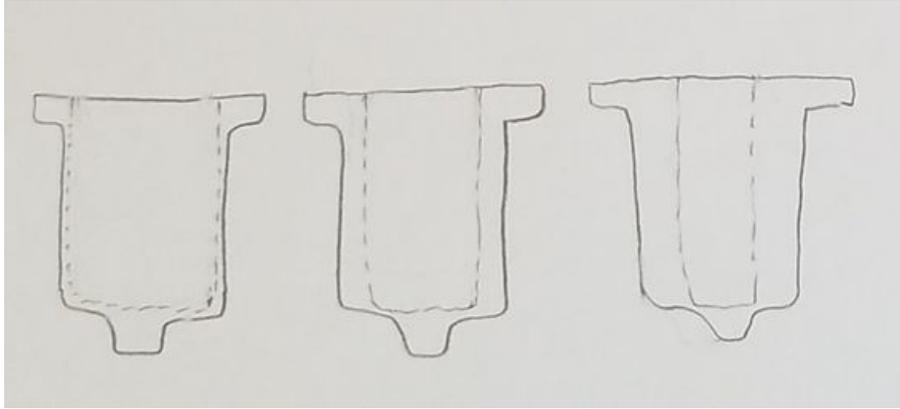




- For the current K-cup design, after the coffee making process is over, there is only a single puncture from the needle in the top of the K-cup
- The user has no inclination to separate the top from the K-cup and would rather just dispose of everything still combined
- This idea forces the needle to have a surface that would extend and remove the lid when the the handle is lifted upwards
- This way the lid is separate and the user can see the filter and coffee grounds
- The hope is that the user will throw away the filter/grounds while having more opportunity to recycle the lid and cup



- This design tries to eliminate K-cups all together
- The lid would be attached to the upper portion of the machine and have a spout for water to be dispensed
- There would be a permanent cup cavity in the bottom portion of the machine. This could be removed and washed if needed.
- The permanent cavity would need a slot in the end where the coffee could be dispensed from. This could be actuated to be open during the coffee making process and closed afterwards.



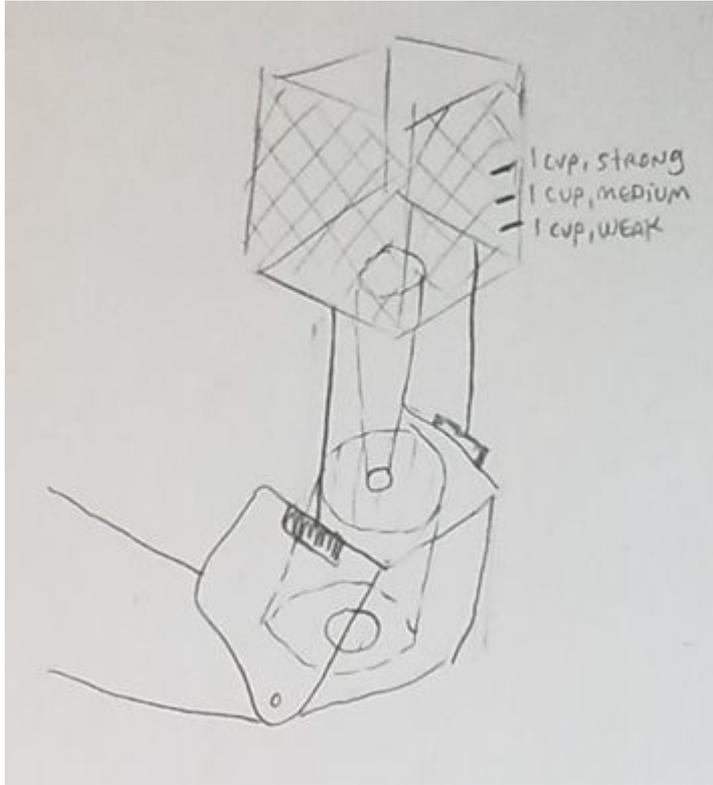
- Building off the previous idea for a permanent but removable cup cavity
- There was a concern that the strength of the coffee could not be adjusted, just the amount of water that was dispersed by the machine
- Offering multiple cups with different cavity dimensions could allow the user more control over the amount of coffee grounds being used to make their coffee



• FILTERS THAT
WOULD BE
SOLD LIKE
CUPCAKE FOIL
LINERS

- STACKABLE
- LESS STORAGE
- LESS WASTE
- CHOOSE YOUR OWN COFFEE
- DIFFERENT SIZES

- The permanent cups would most likely need some sort of protection or barrier
- Filters could be created similar to cupcake foil liners with predetermined diameters and heights
- Benefits could include:
 - Stackable
 - Less storage
 - Less waste
 - Ability to fill with coffee of your choice
 - Offer different sizes to fit different cavity dimensions



- If filter liners were used, the user would need to be able to accurately fill the filter with the correct amount of coffee grounds
- The proposed solution would be a removable device that could attach to the machine with clamps
- There would be a container with marks that represents how much coffee should be placed in order to achieve the desired strength of coffee (weak, medium, strong, etc.)
- There would some funnel system that can be opened and closed in order to dispense the coffee into the permanent cup