The Cauldron

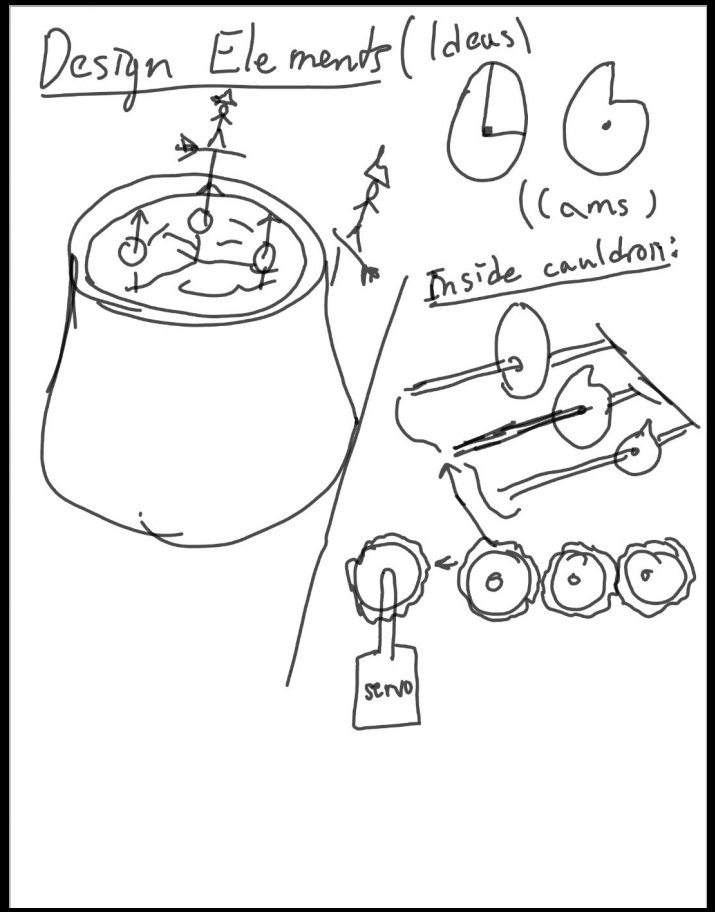
Presentation by the Coven

Group Members:

Araceli Aronin, Anneliese Hanson, Juliet Stansbury, Clare Hummer

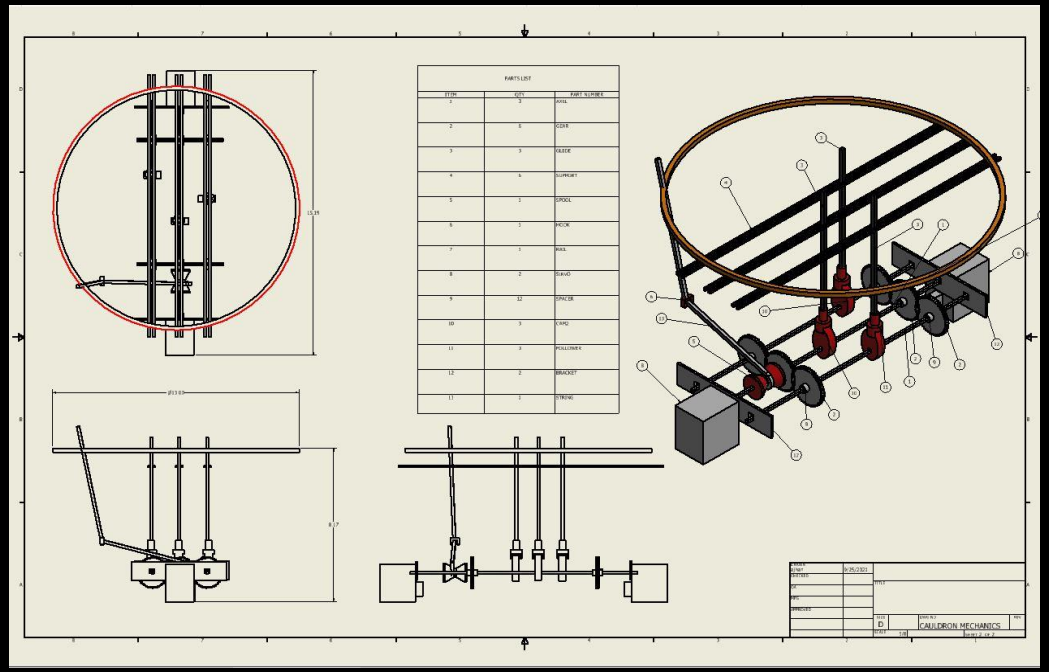
Description:

Cauldron with moving parts popping up, and a witch flying around the cauldron.

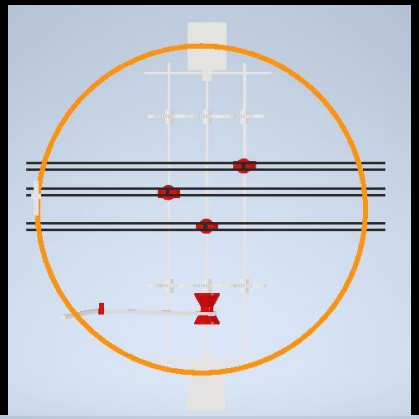


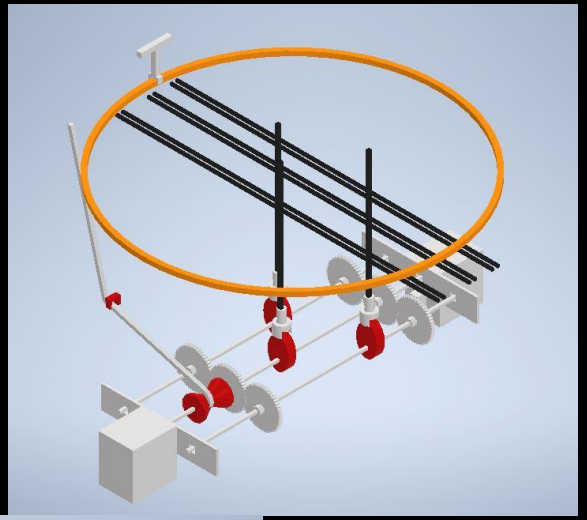
Parts List:

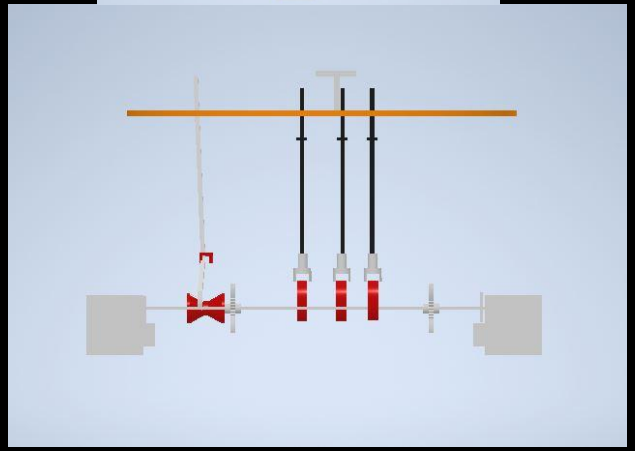
1. Cam
2. Axel
3. Gear
4. Guide
5. Support
6. Spool
7. Hook
8. Rail
9. Sirvo
10. Spacer
11. Follower
12. wire

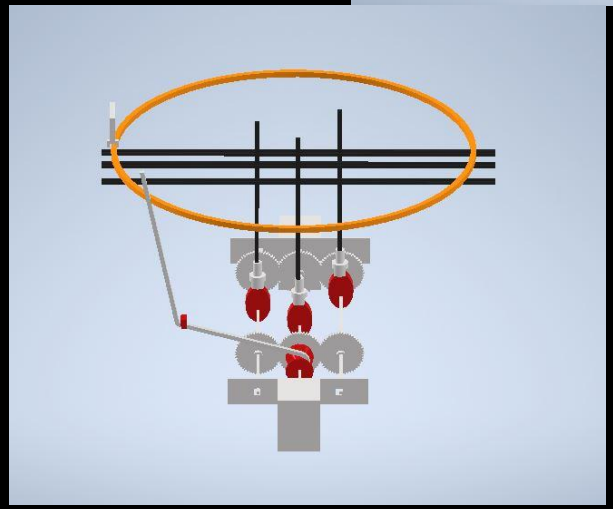


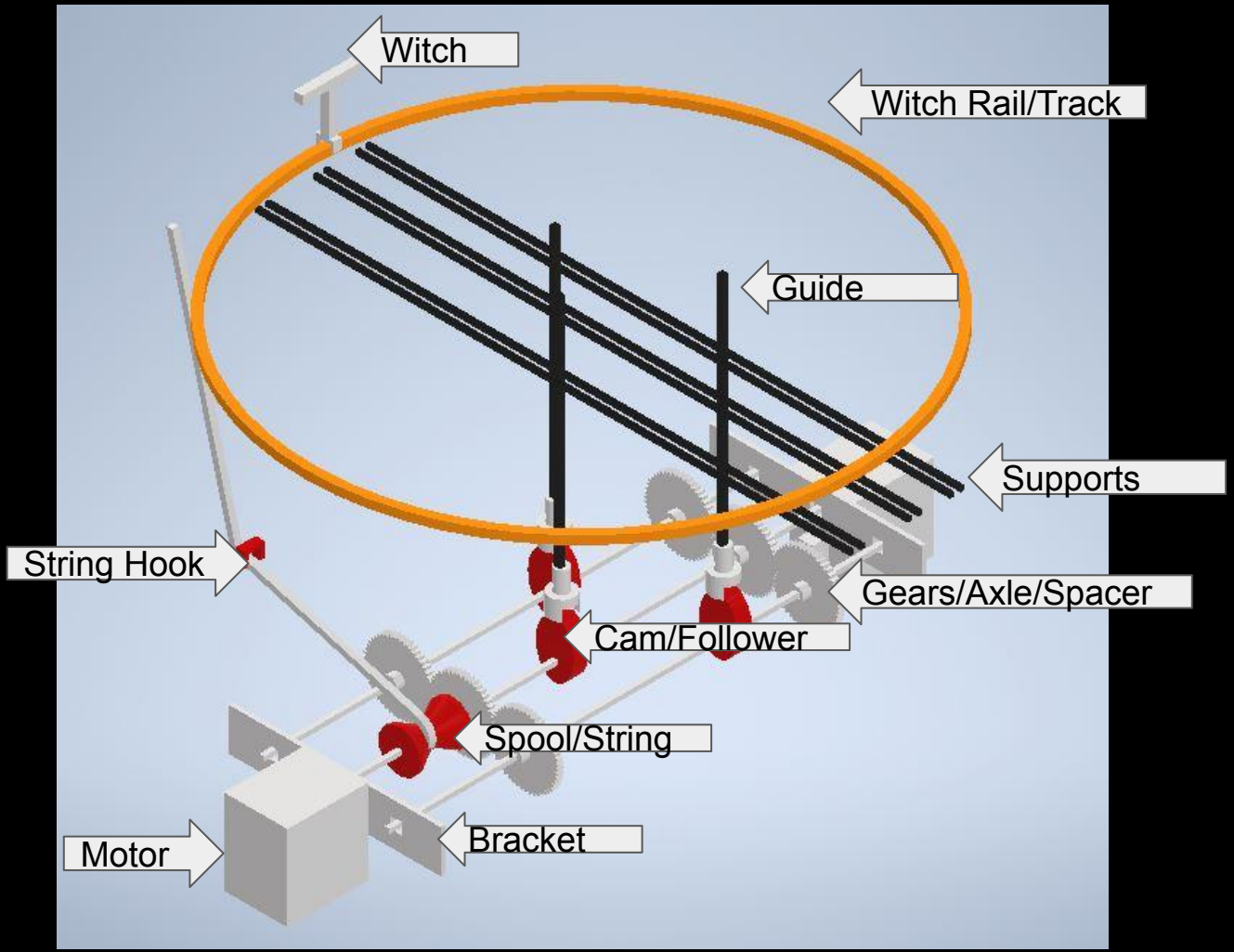
CAD Models



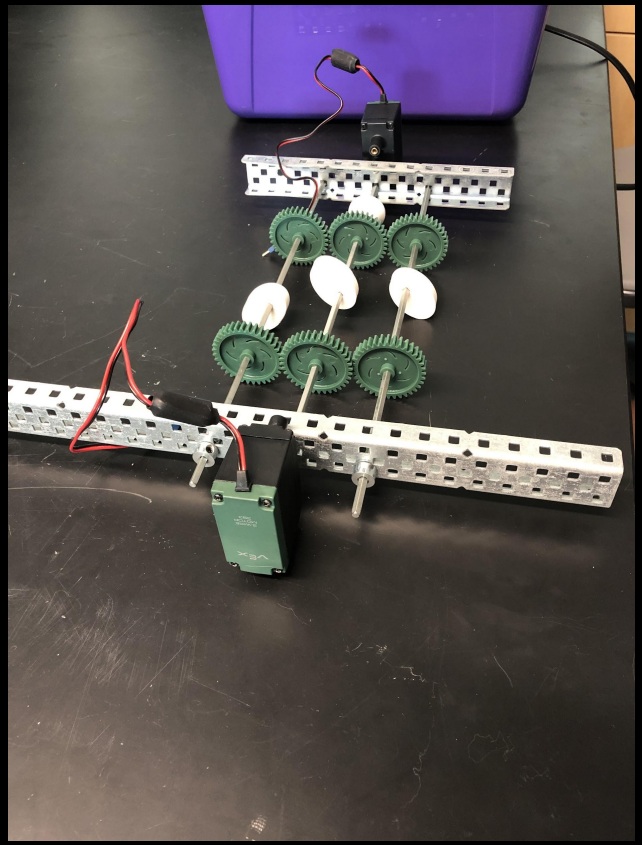


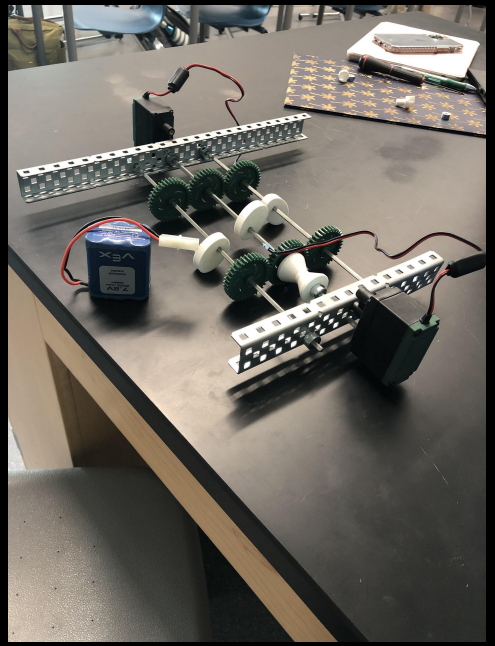





Witch
Witch Rail/Track
Guide
Supports
String Hook
Gears/Axle/Spacer
Cam/Follower
Spool/String
Motor
Bracket

Current build so far:

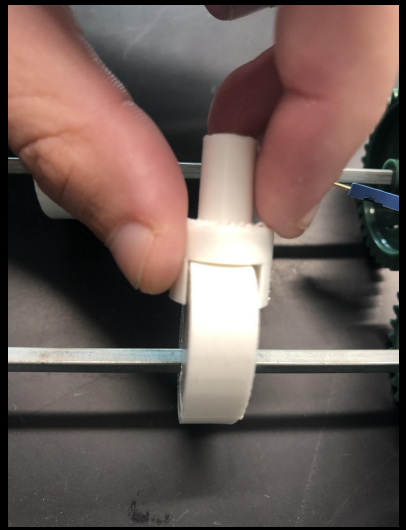




Currently, we have four design issues ...

Witch design - we are not sure what type of witch design to make, or how the weight of the witch will affect the pulley-system for directing the witch moving around the cauldron, do we need a track, or can we use the cauldron?

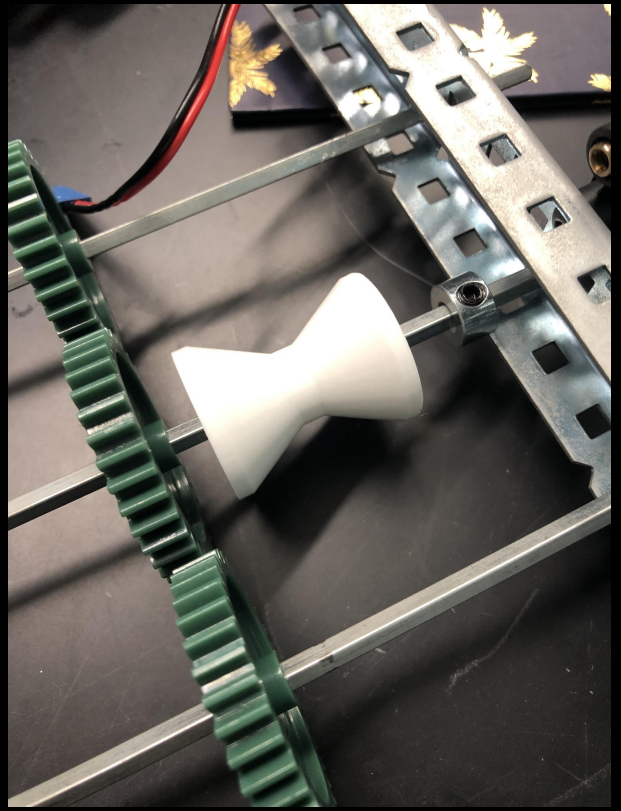
Follower system - The follower system fits overs the cams, the gap that fits over is big enough to prevent too much friction, but is it too big?



Axle holes on cam are too small - Our axle holes for our cams and pulley systems end up either too big or, more often, too small. We want our cams to be placed onto the axles but not slide once there.

*mostly resolved, we just need to find the sweet spot for the dimension

Pulley-system, the spool being used is attached to the axles for the cams, but we are not completely sure how to make the pulley system work to continuously move the witch around the cauldron, we are also unsure of what type of wire to use and how much of it.



Please leave your feedback in the google form

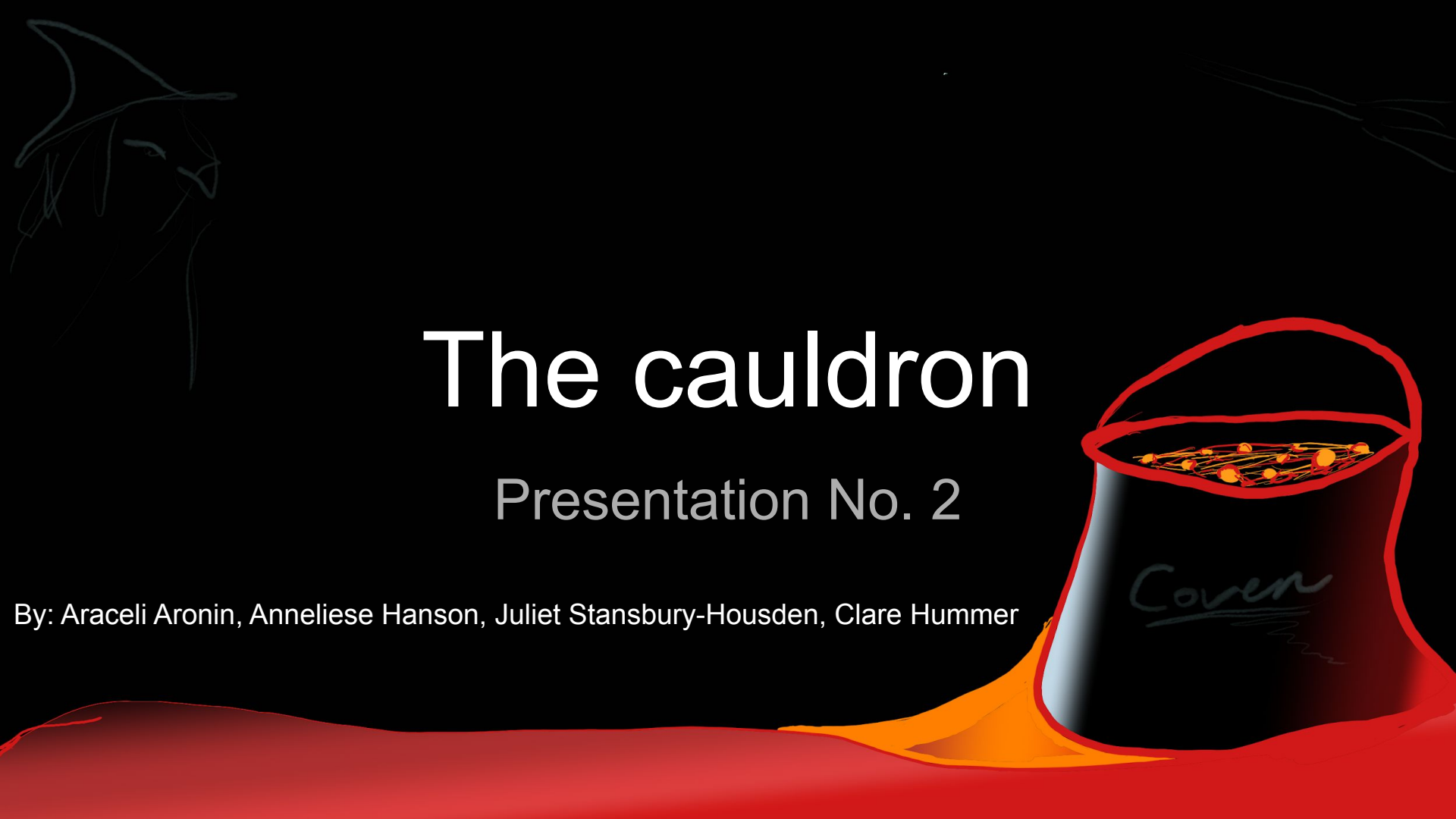
SCAN ME

Or use this link: https://tinyurl.com/3vstndpp

The cauldron

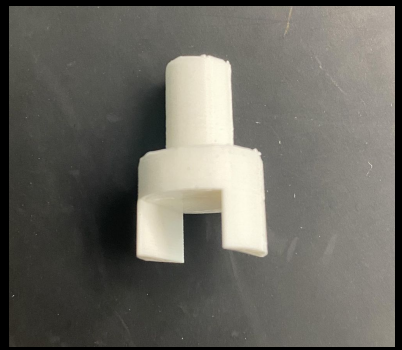
Presentation No. 2

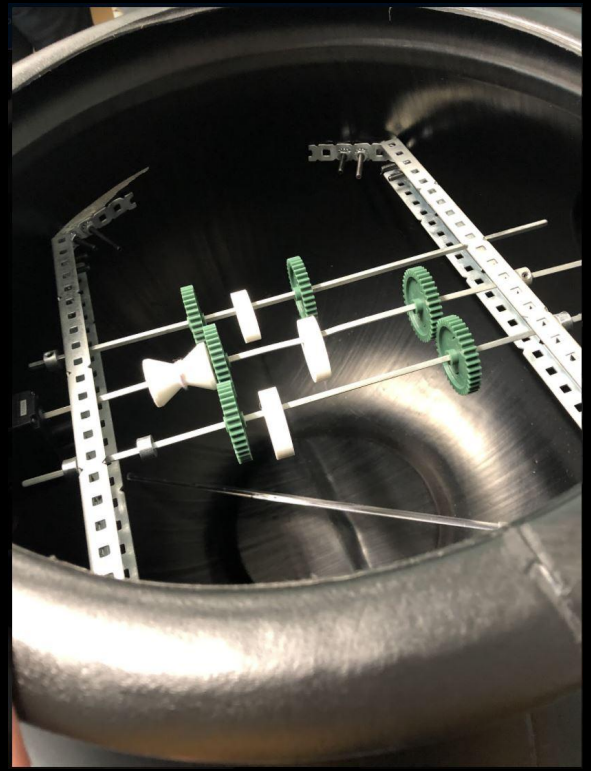
By: Araceli Aronin, Anneliese Hanson, Juliet Stansbury-Housden, Clare Hummer



Updates

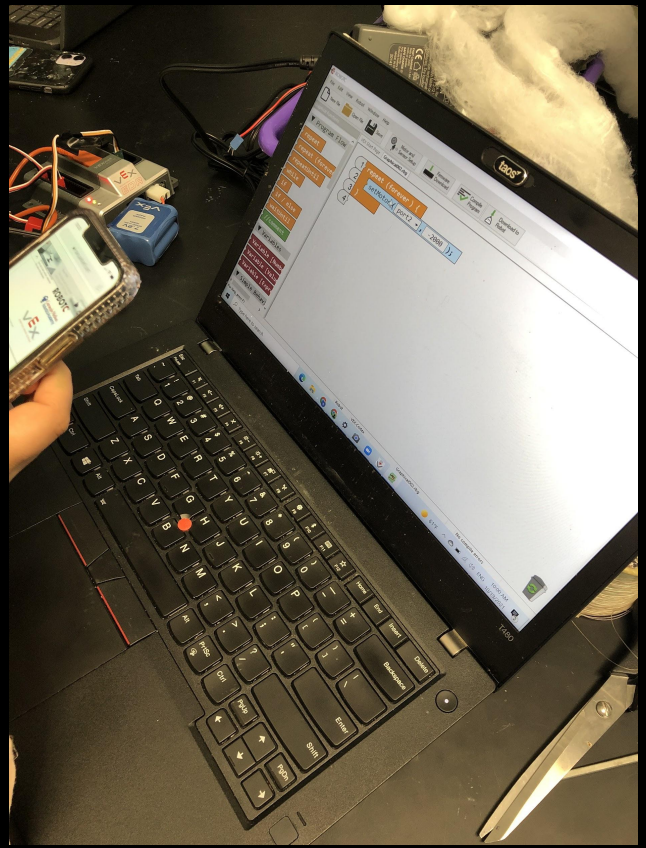
- Mounted mechanism on cauldron
  - Drilled holes in cauldron
  - Printed better cams/followers
  - Mechanism works
  - Added fishing line “web” to support follower





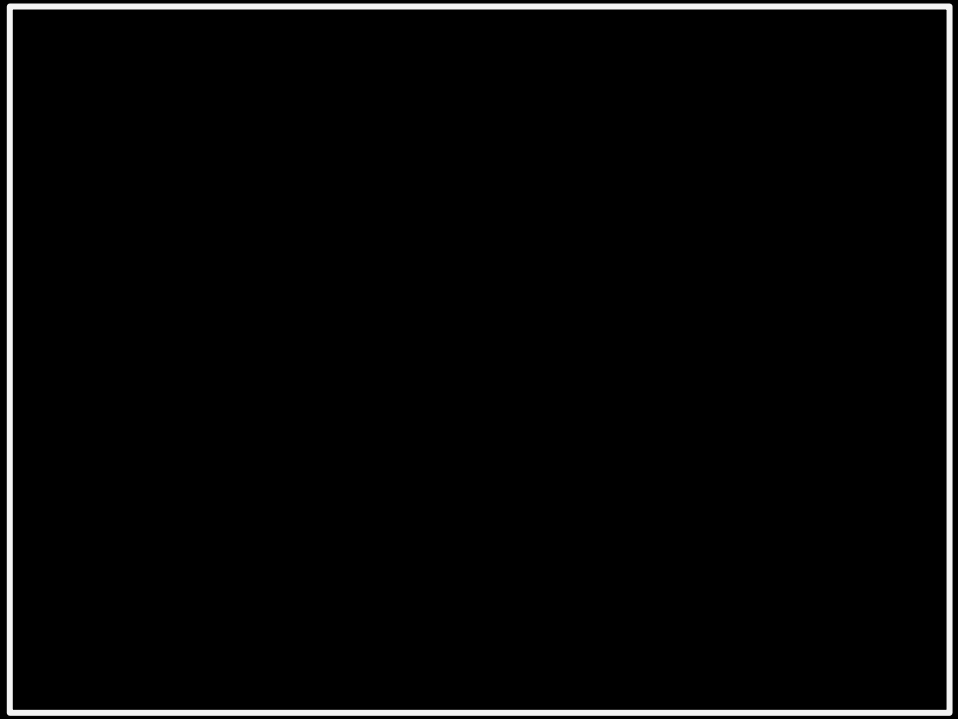
Coding

- Started to code
- Thinking of using a button
- 1 servo
- Troubleshooting why the code isn’t transferring to robot



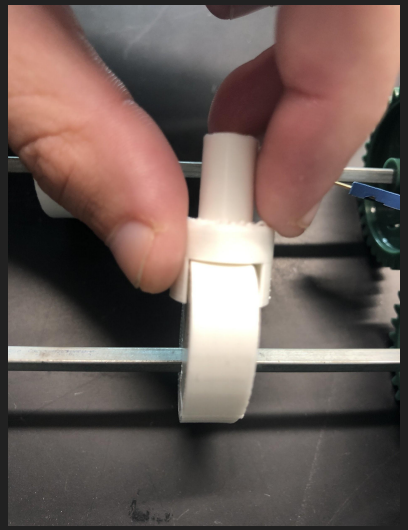
Problem: fishing wire

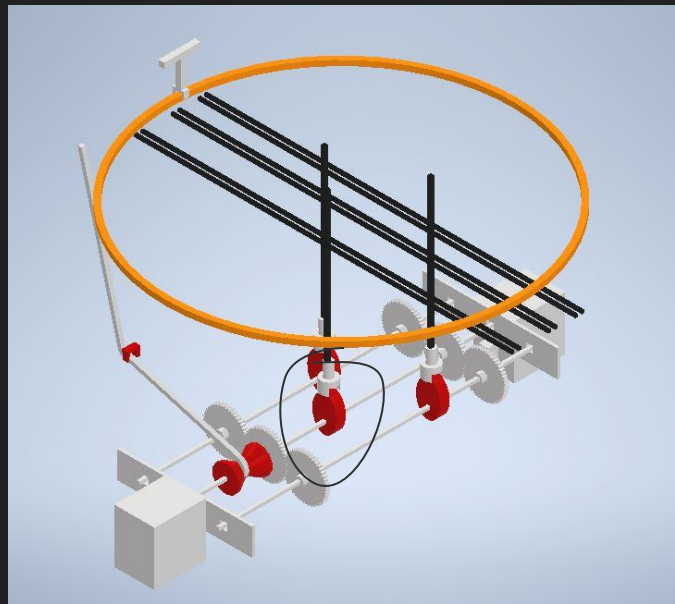
- The fishing wire supports the top of the follower, but not the bottom
- The bottom of the follower falls off of the cam
- Ideas:
  - Change shape of the follower
  - Add another layer of fishing wire below the original



Cam and weights

- When only using axel and styrofoam, easily falls off of cam
  - when adding weight to cam by hand/heavier weight, the cam doesn't fall off as easily
  - Is the cam the issue?
    - Change the elliptical cam
    - Maybe more circular?
    - Bigger?
    - Change in size???
- Ideas for heavier top
  - Pumpkin
  - Skulls





Witch

Witch:

- Haven’t figured out the rail and witch moving around the cauldron
- Not sure if we will still do it
- Ideas:
  - Horizontal axle: witch only moves in one spot up and down
  - Connected to a horizontal gear to a vertical gear
- Do we have the time?

Everything Moves!

- The pieces (cams, gears, axels) move out of place and fall off the brackets and out of the sirvo
  - Tried the metal circles to lock in the axles, causes to much friction and prevents the axle to not move well
  - Do we need to stack the plastic ones? In between the gears also?

Why is this an issue?

- Need to adjust every time,
- The cam are no longer aligned with the follower fishing line web

Conclusion

What we will continue to work on until October 29th

- Completing the code on the mechanism
- Make the follower stop falling off of the cam
- Find toppers that will work for the cam
- Decide on any last minute details

Thank You For Listening