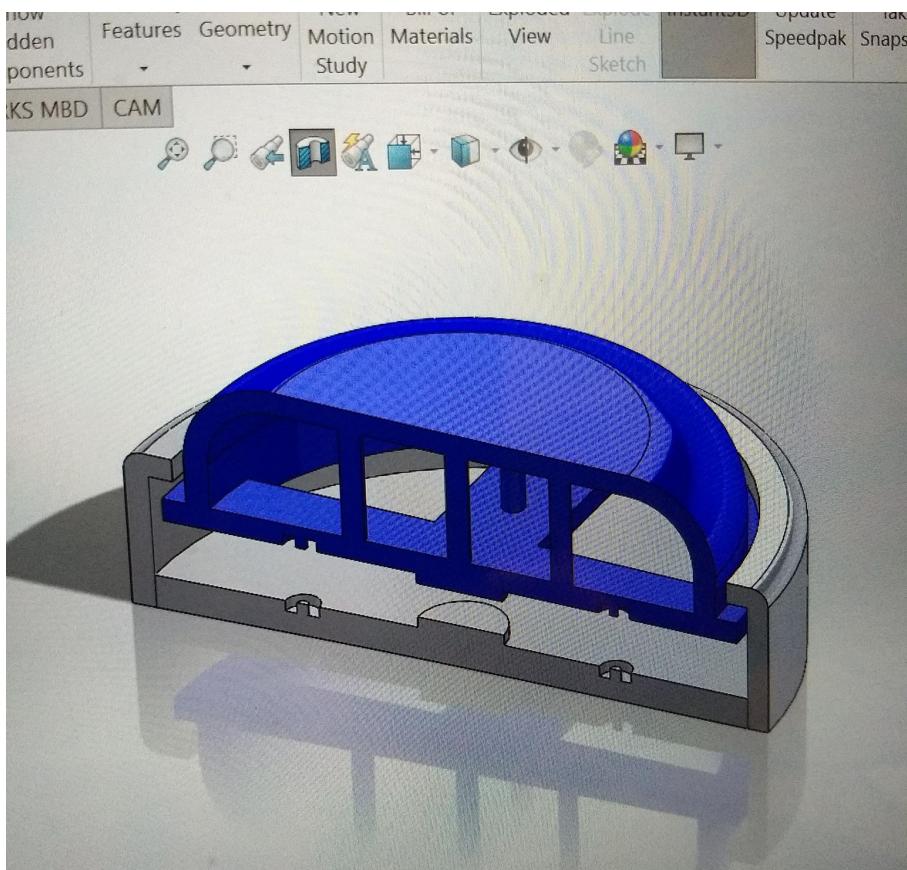
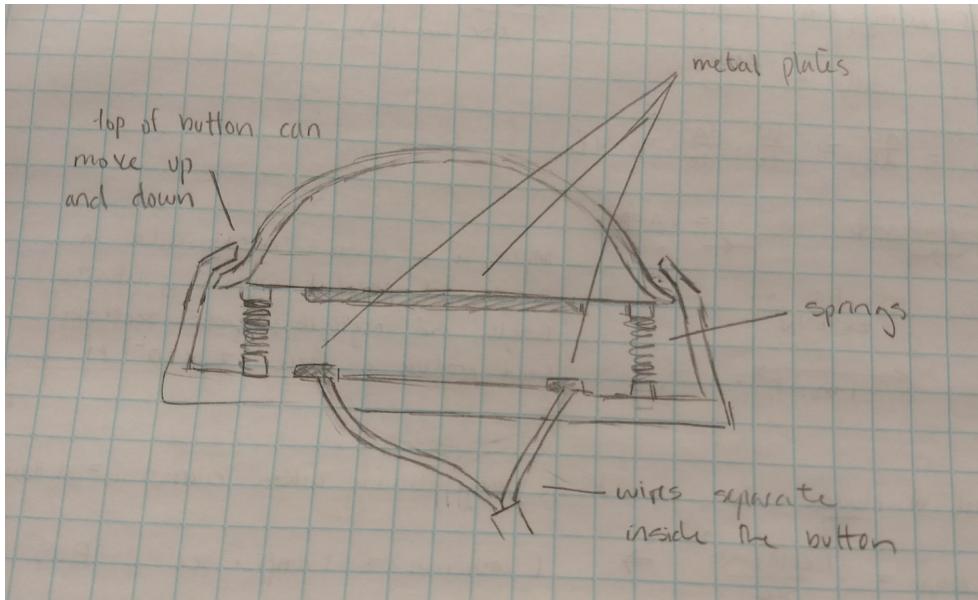
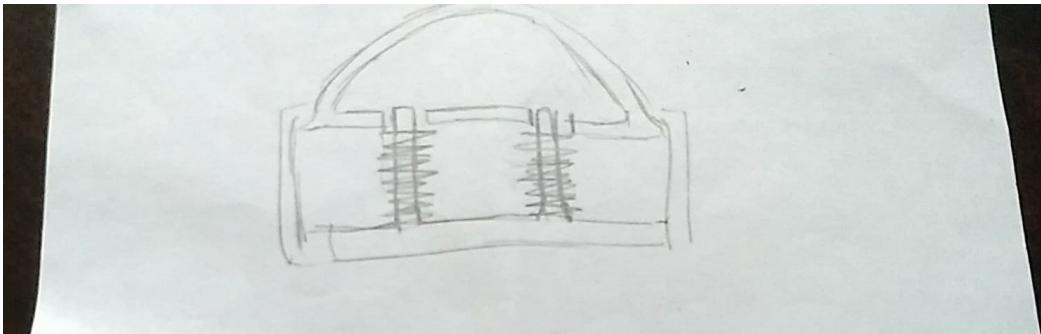


## Design 1:

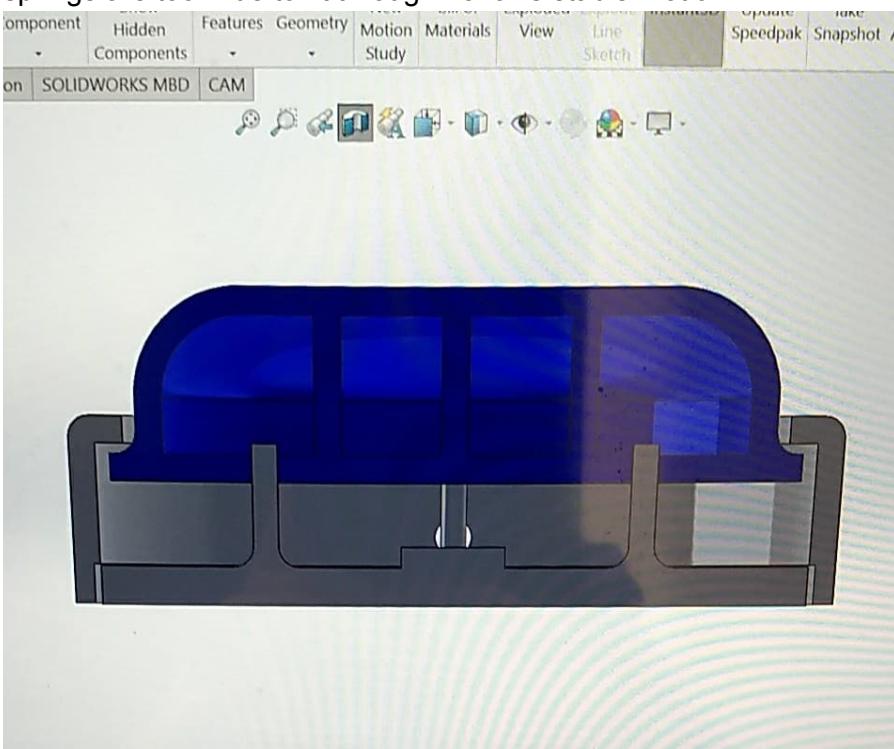


**Problems:** Springs bent everytime pressed, motion wasn't smooth, very unstable

## Design 2:



Pillars go through each spring. As switch is pushed, pillars go through the hole at top, but springs are too wide to fit through - allows stable motion

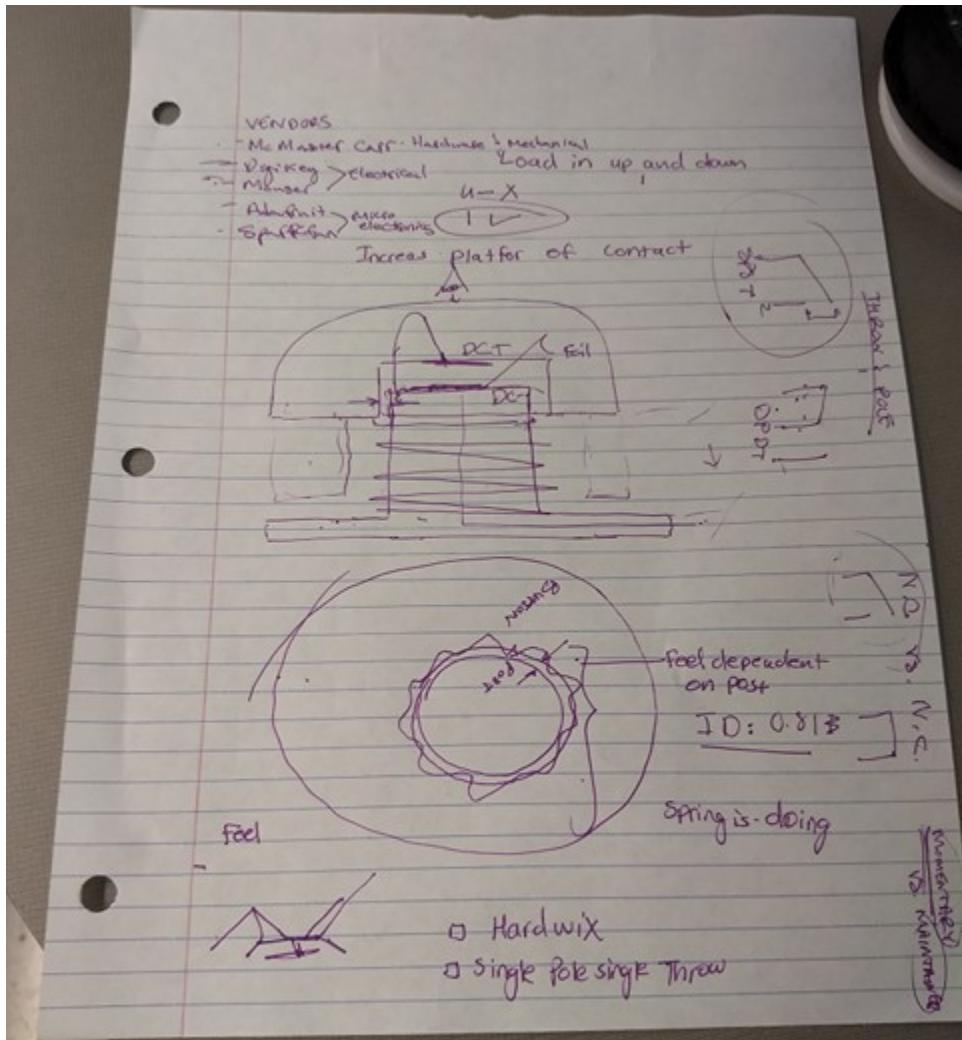


Video of CAD design in action:

<https://drive.google.com/file/d/1NUQzOU4ovnnQxNVaz98TwcaXVjdov9sE/view?usp=sharing>

**Problems:** Pillars were too thin - had a high chance of breaking after many uses

## Design 3:



Similar to Design 2, but with one giant spring instead of four.  
We found that this

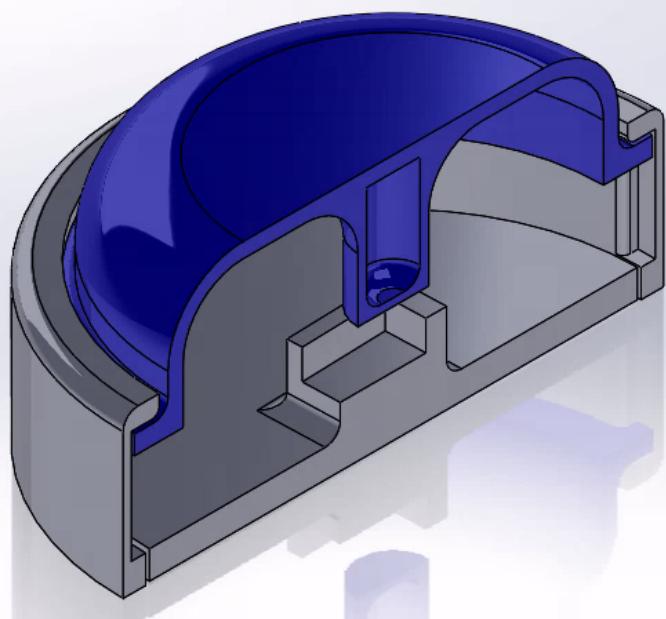
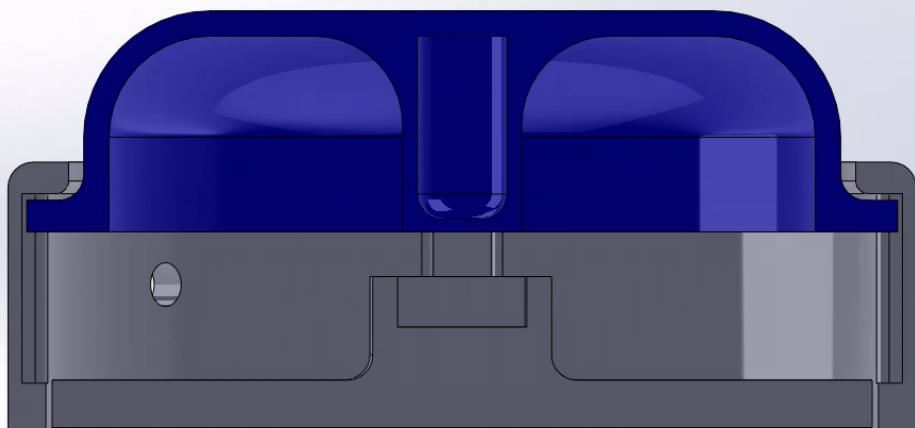
## Design 4 (Current Design)

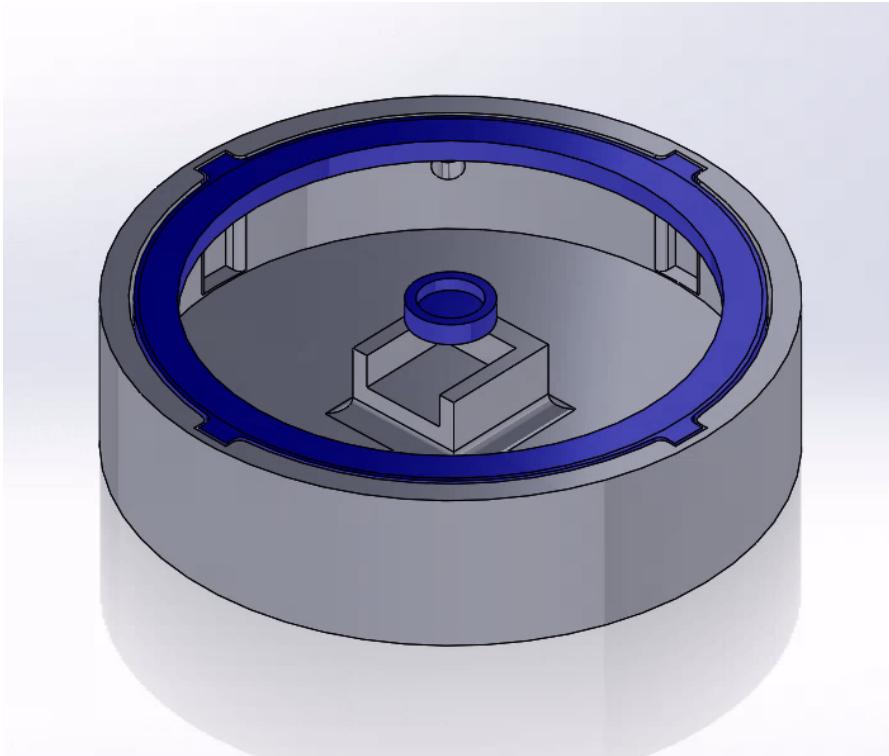
CAD files on Google Drive:

[https://drive.google.com/open?id=1hBC11GkWOwh\\_urT9euCHhridsnibDm](https://drive.google.com/open?id=1hBC11GkWOwh_urT9euCHhridsnibDm)



This design uses a push button that is encased in the center of the switch





^ Notches keep top part in place

#### Problems:

- Top part might be lopsided if it only sits on push button
- Need to secure bottom to side (screws?)
- Center structure for push button might be too fragile

#### Parts:

Pushbutton -

<https://www.digikey.com/product-detail/en/cw-industries/GPTS203211B/CW181-ND/3190590>

Cable - <https://www.digikey.com/product-detail/en/cnc-tech/770-10040-00050/1175-1491-ND/3868284>

Price analysis -

[https://docs.google.com/spreadsheets/d/1cOLpQ1IBTUsaahhdbD0WpCPJ56dMJ7T\\_vrsJuTzl0e0/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1cOLpQ1IBTUsaahhdbD0WpCPJ56dMJ7T_vrsJuTzl0e0/edit?usp=sharing)

#### Next Steps:

- Finish final design details
- Research time and cost efficient manufacturers
- Order switches