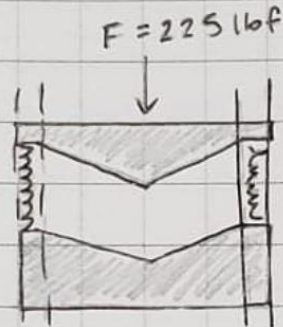
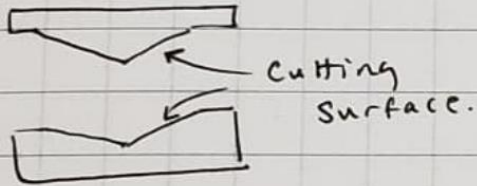


Spring Recommendation for Guillotine

Lift capacity: 225 lbf (Given from item).

Blades



$$\sum F_y = -225 \text{ lbf} + 2 F_{\text{spring}} = 0$$

$$F_{\text{spring}} = 112.5 \text{ lbf.}$$

From sketch, distance between guillotine blades is 8"

Springsfast.com.

Don't want $k = 14.1 \text{ lbf/in}$, otherwise the guillotine wouldn't move.

I recommend $k_{\text{max}} / 2$.

and $L = 8"$

\Rightarrow get a spring w/ $k \approx 7 \frac{\text{lbf}}{\text{in}}$

$$F = kx \Rightarrow k = \frac{F}{x}$$

Max.

~~14.1~~

$$k_{\text{needed}} = \frac{112.5 \text{ lbf}}{8"} =$$

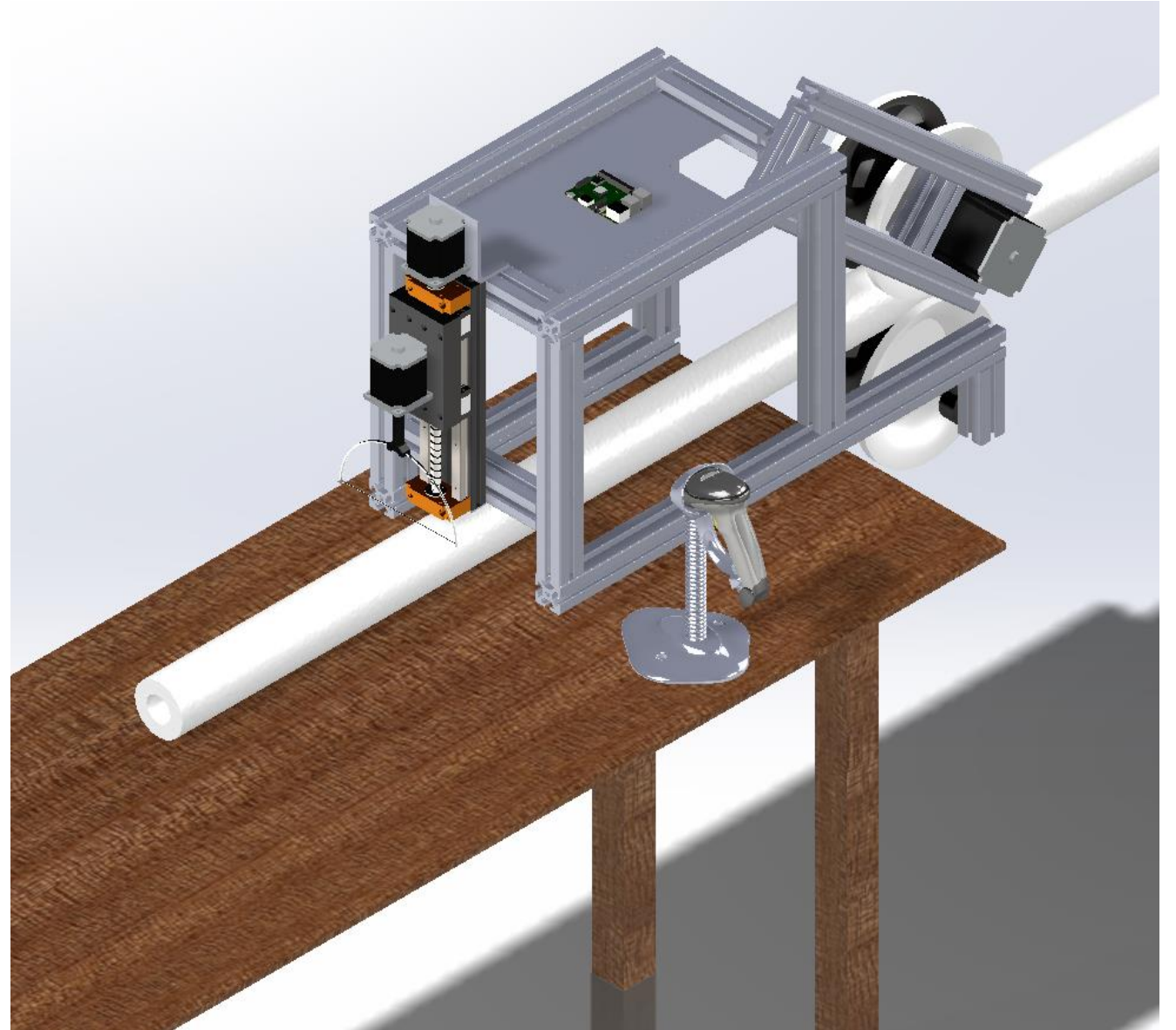
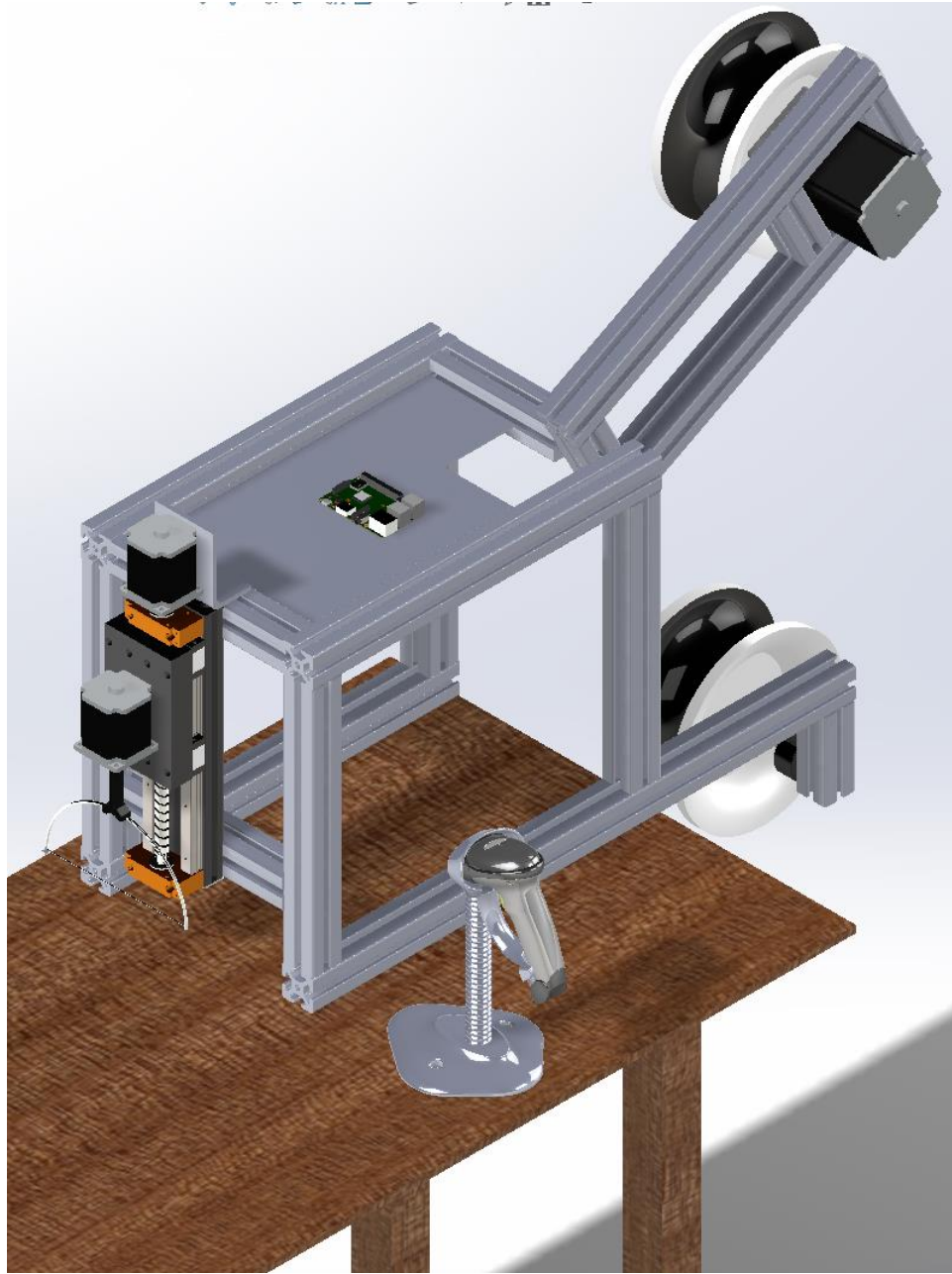
$14.1 \frac{\text{lbf}}{\text{in}}$

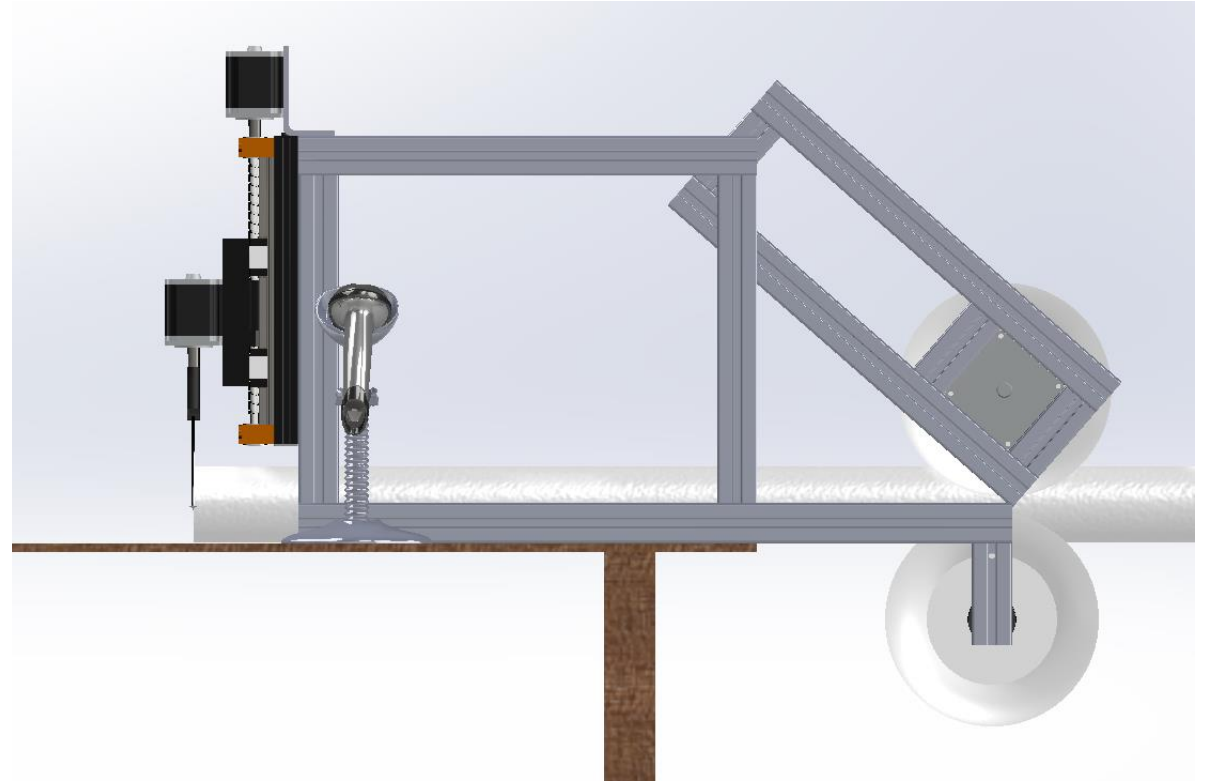
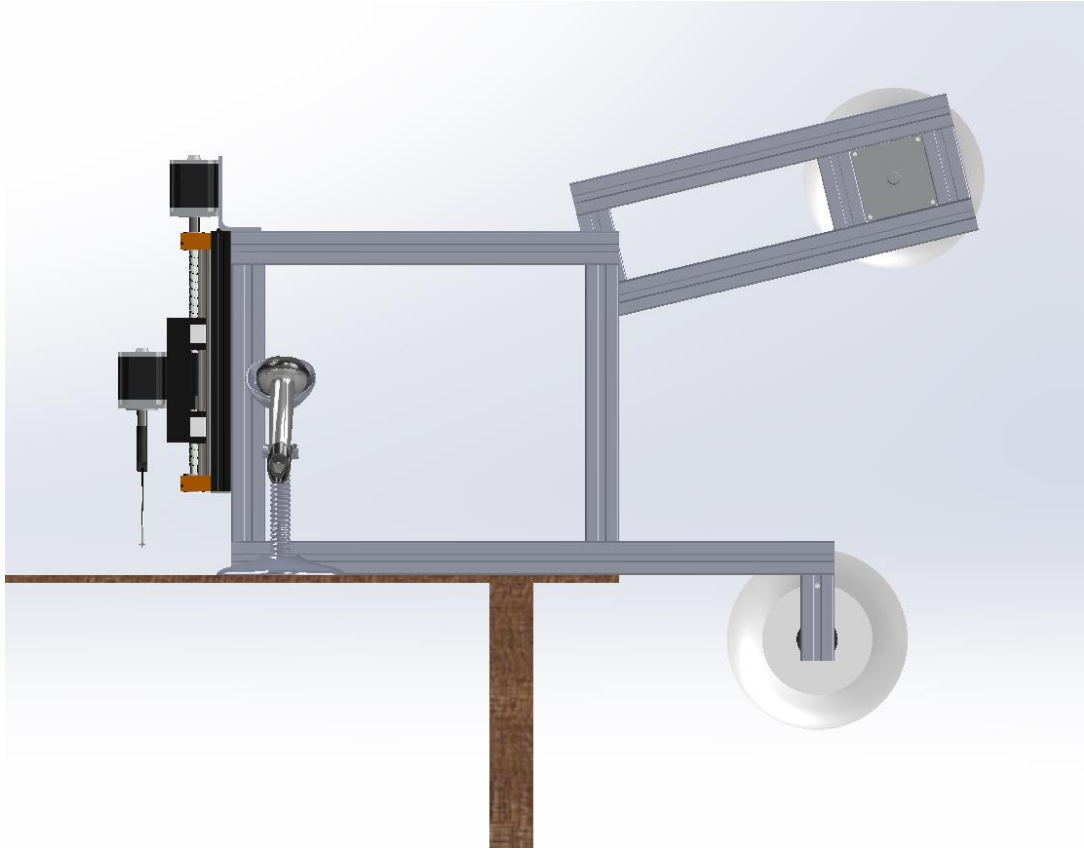
Cost \approx \$3.98 / spring.

This site has a \$35 min. order cost.

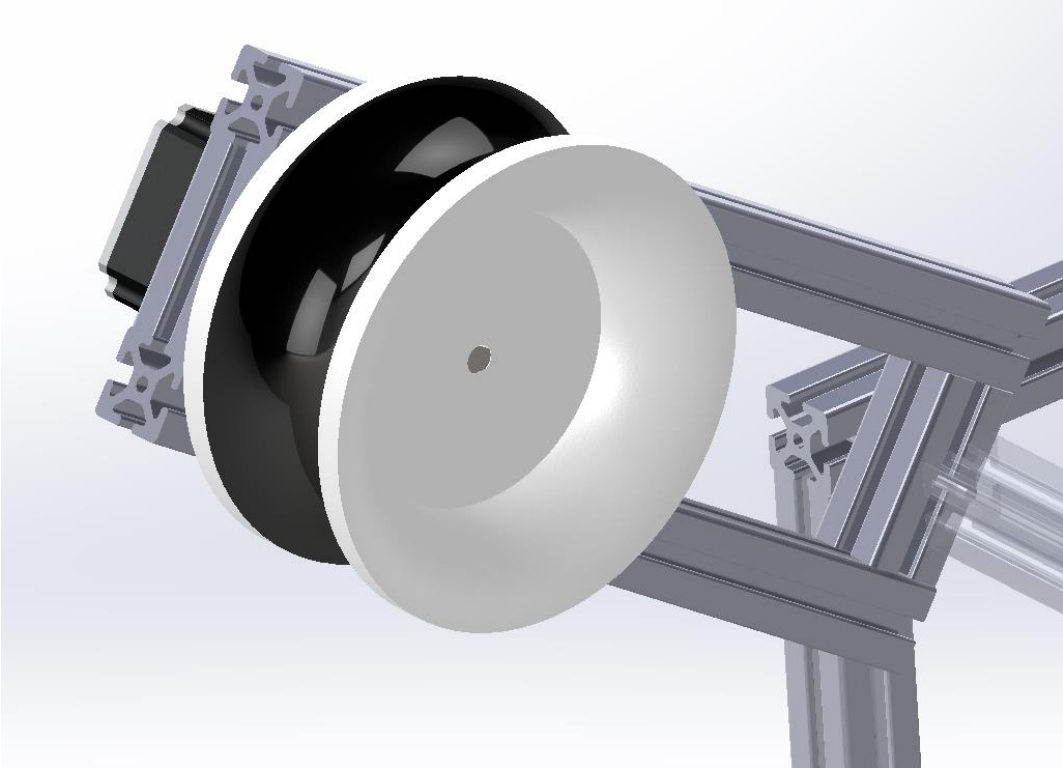
Prototype Model

Ian Glasgow

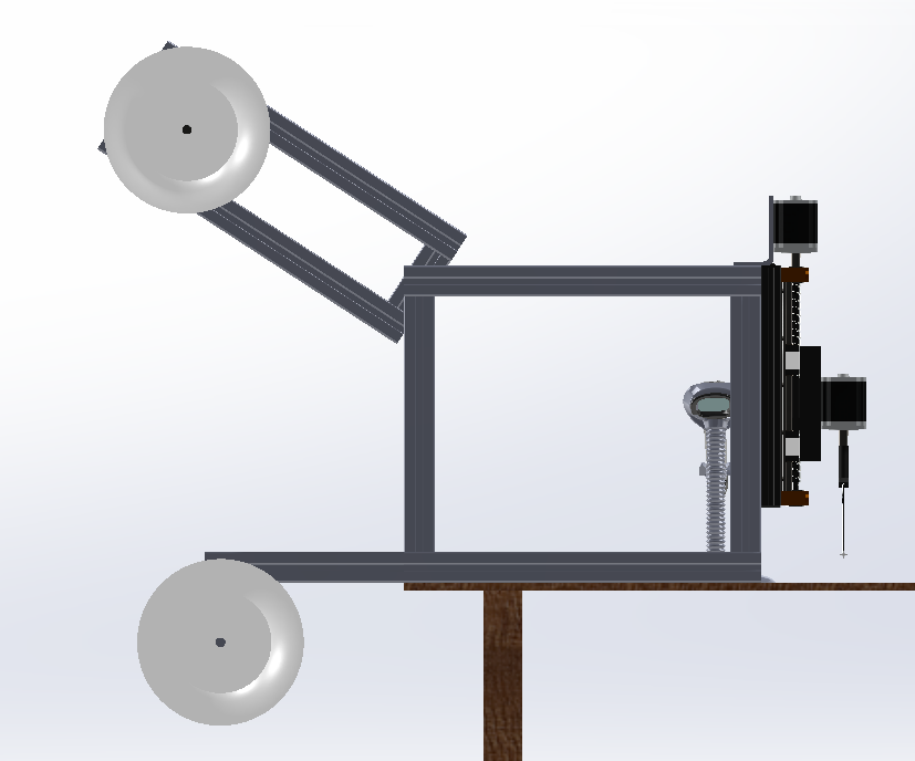




Problems

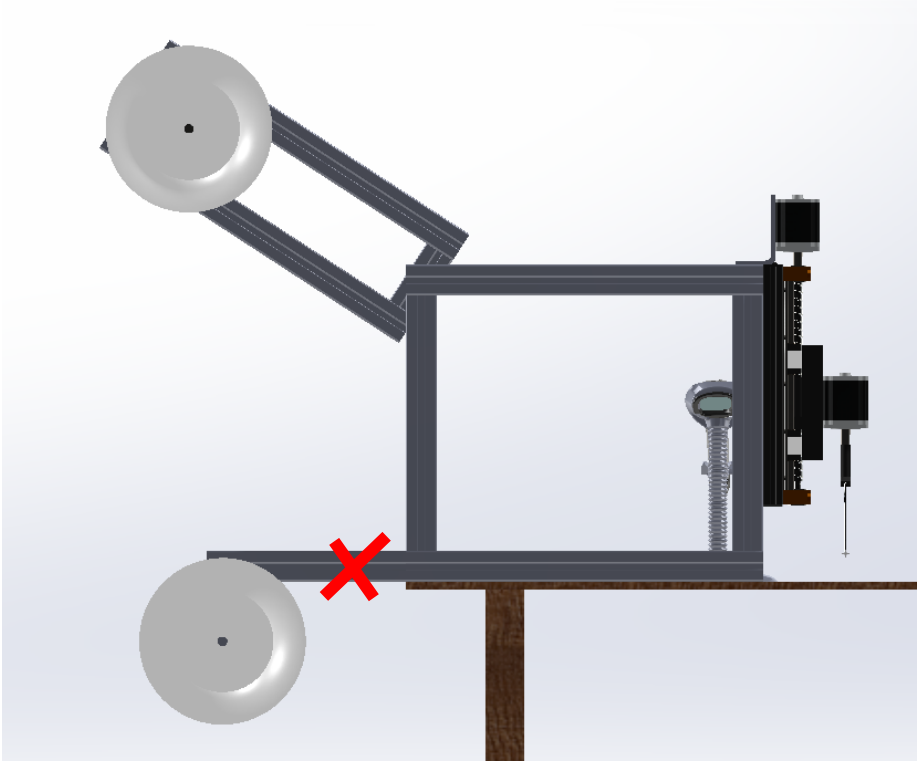
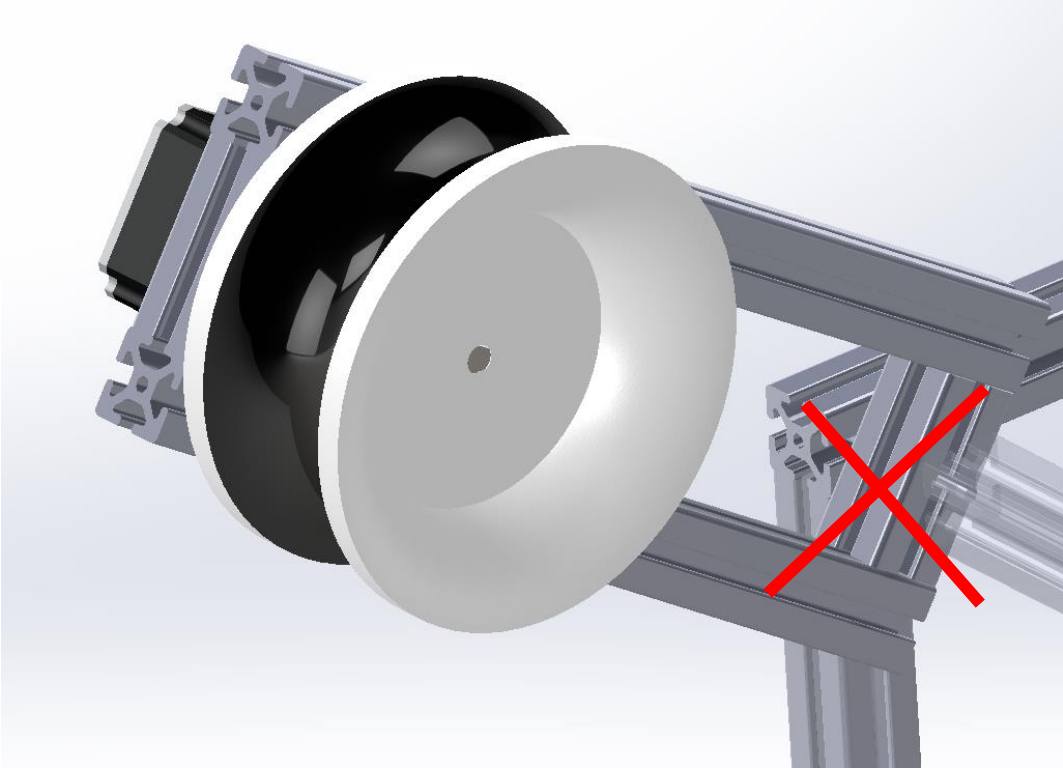


Hinge



Overhang

Problems



Keypad

- Can allow for manual input if barcode doesn't work
- Can allow us to put in how many we want cut at that length

