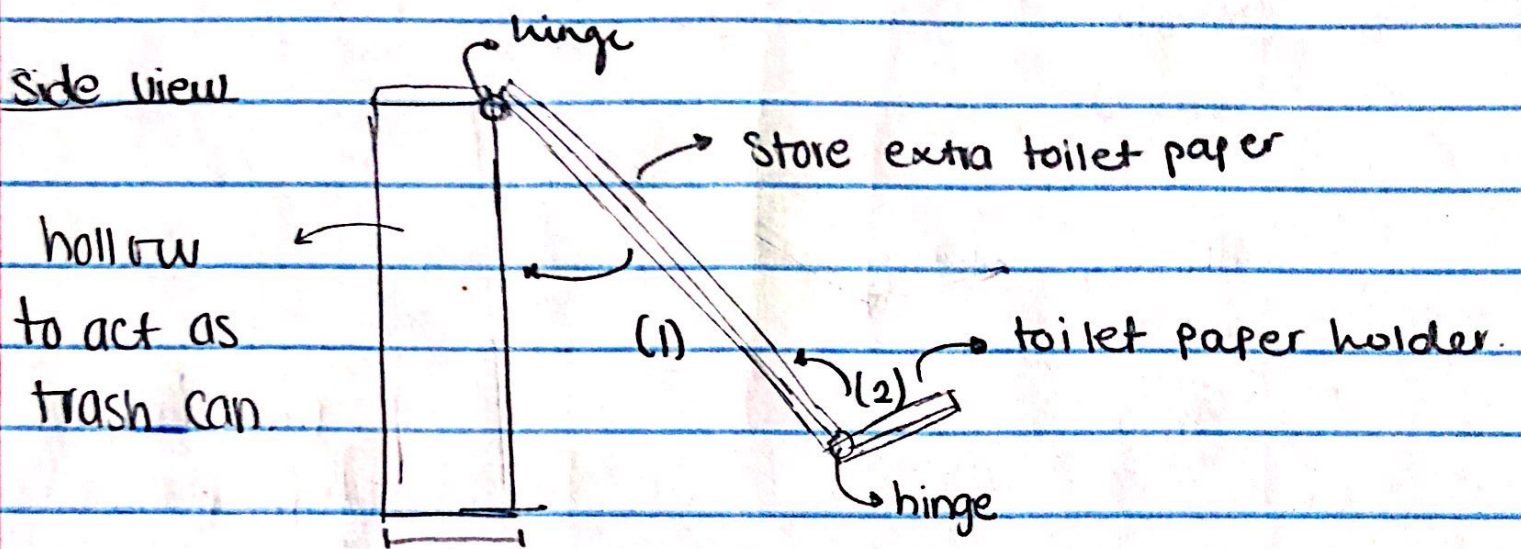


Strategy 1: The toilet paper holder for the College Students.



Arms (1) and (2) can be folded inwards.

m = maximum load the holder can withstand = 15 lbs

$$g = 9.8 \text{ m/s}^2$$

$$F = mg \Rightarrow F = m \cdot g = 15 \text{ lbs} \cdot 9.8 \text{ m/s}^2 = 147 \text{ N}$$

↳ force.