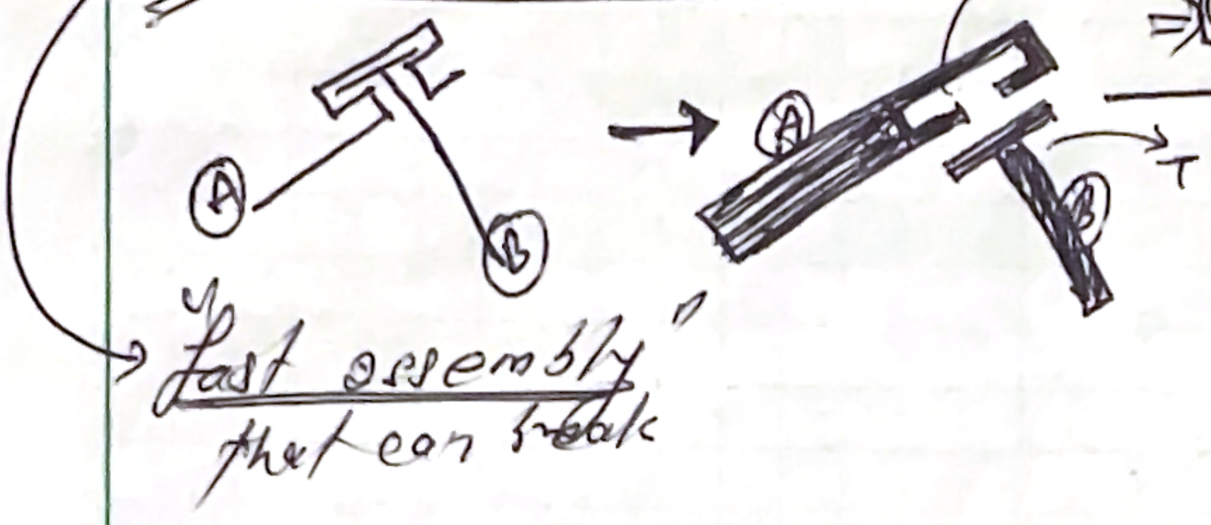
T-lock Design

Build an autonomous late tractor for Nepal

Remember to design a solar system to recharge battery that runs water pump to 4.2V

Build chicken butchering machine



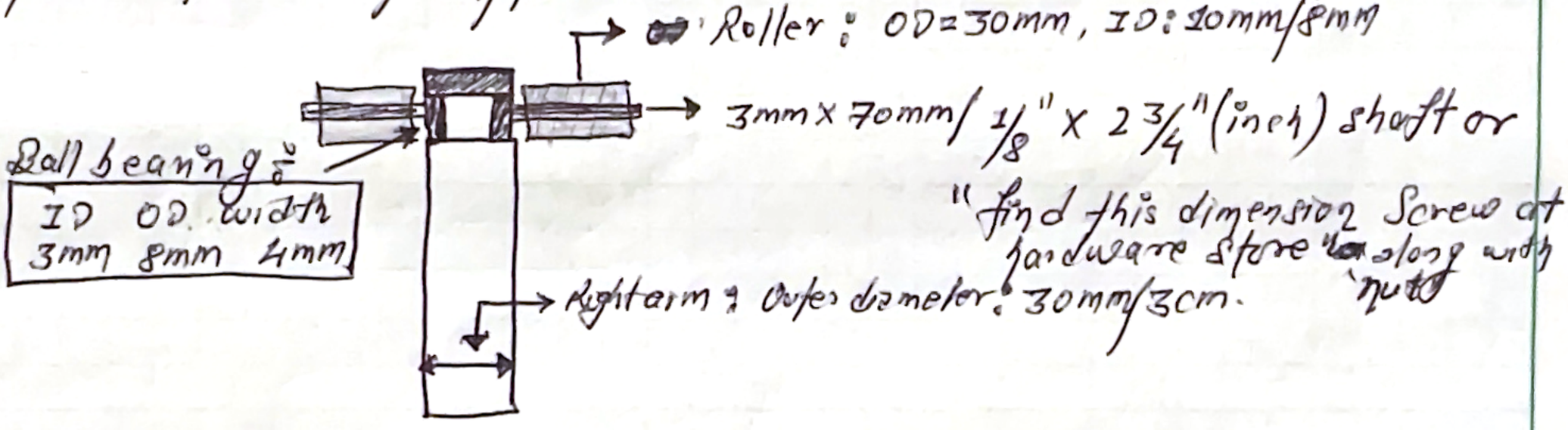
"Last assembly" that can break

if becomes hard to sink in between 'C' & 'T', add wheel & spring at 'T', to make a smooth locking mechanism. Wheel reduce friction. Also, make sure 'C' is curved, so that wheel from 'T' can roll in well without having the arm (B) struggle to lock in.

For now, Let make it simple without adding wheel & spring.

I finally choose to add wheel as well, at 'T'.

Here is the design approach:



Why I decided to use "above mentioned" bearing size instead of using bigger bearing?

Because of weight problem. For see these bearings are already at the tip of the arm, hence already overstressing the servo motor at the another end of the rod. Biggest one is around 40g, where as smallest one I have is just 1g. Advance of using bigger one would be I may not have to use metal shaft, since 3D printed plastic shaft would be able to handle the pressure/force, not guaranteed though. where as using smallest bearing because of wt constrain automatically call in for metal shaft for some reason. Question now is

what about the wt of metal shaft & smallest bearing? If they exceed the wt of using biggest Bearing, would it be still good idea to use smaller one?

=> My preliminary study find the wt doesn't still exceed.