Standing Gardener

Work Completed

This week we mainly worked on the standing gardener. We finished all eight of the support tubes and eight of the support pipes. We drilled 14 holes in each tube and pipe 2 inches apart each. Once the holes were finished being drilled there were sharp burrs around the edge of all the holes. To take these burrs away we countersinked all of the holes. This not only made the tubes and pipes safer to touch but also gave them a nice finished. Now all of the holes on one side of the tubes and pipes have a taper. However, even after the countersinking was done there were still a couple sharp edges. For the finishing touches we had to file all of the holes on the tubes and pipes. After all of this was finished we were done with that part of the standing gardener.

Also this week we were able to mark out and cut our stainless steel sheets. Since they came as rectangular sheets and we needed to cut a radius on them this was pretty difficult. We used a hydraulic sheerer to achieve this. However, the sheerer only cuts straight surfaces so the finish was not completely smooth. To smooth out the edges we used the belt sander for places which needed heavy sanding and the handheld belt sander for places which needed slight corrections. After the edges were sanded we obtained a plastic piece which covered the sharp edge of the sheet. Also we cut the circle out of the center on the workspace where the potholder will be. To do this we used the band saw. Since the circle had to be completely enclosed we first had to punch a hole in the circle. Next we passed the blade of the saw through the hole, and then welded the blade back
together. After all of the cutting was done with the band saw there were many burrs left behind. To clean up the burrs we used the file. Figure 1 shows the stainless steel sheet as it was being cut using the hydraulic sheerer. It is also seen in figure 1 the circle we layed out and cut using the band saw.

![Figure 1: Using the hydraulic sheerer to cut the outer radius of the workspace.](image)

**Future Work**

Currently we are working on welding the stainless steel feet on the ends of the tubes and pipes. These feet will then be bolted to the workspace. Figure 2 shows the feet welded on the pipes and tubes.
Multi-Terrain Wheelchair

This week for the multi-terrain wheelchair we discovered the casters will hit each other if they are mounted to the wheelchair in the position the old casters were. There for we made plates which we will bolt to the new casters. The plates are 5 ¼” by 5 ¼” with a hole in each corner. The holes are set in 15/16” from each side. These plates will then have a small piece welded to them which will move the wheels out just a couple inches to prevent contact.

Also for the wheelchair we have been designing an axel for the back wheels. We have discovered the wheels need separate axels to allow the wheelchair to turn. The wheels we have now have a 1”axel while the wheelchair has ½” axels. Therefore we will need to make an axel for the wheels that is different in size for the two parts.

Hours Worked: 15