Peter George

BME 4910

Weekly Reports: Week 4

Peter’s contributions to the project during week four can be summed up in two parts: aiding in cutting the table sheets for the standing gardener, and welding the feet to the legs of the standing gardener. Last Friday, the members of Team 2 measured out the cutting lines for both sheets that will support the weight of the standing gardener. The drawing below in Figure 1 shows the standing gardener with the areas where the plates will go. Figure 2, also below, shows the members of Team 2 measuring out the plate.

![Figure 1: Plate on complete Standing Gardener.](image)
Then, with the help of the machine shop technicians, the members of Team 2 cut the 33 inch radius out of both plates with the industrial sheet metal cutter. The next step was to sand them down as to remove any sharp edges for safety and aesthetic reasons. Figure 3 shows the cutting and sanding, respectively.

That completes the first part of Peter’s contribution this week. The second part consists of welding the feet onto the telescopic legs of the standing gardener. The
purpose of the feet is to be more versatile when it comes time to attach them to the stainless steel plates that were just cut out in the methods described above.

The method of welding is Gas Tungsten Arc Welding (GTAW) or Tungsten Inert Gas (TIG) welding. A stainless steel plate for the “foot” will be on either end of each leg. Each leg consists of a larger pipe and smaller pipe, and each pipe will have one of the feet welded to it. Once all of the pipes are complete, the feet will be bolted on to the stainless steel plates. Figure 4 shows a picture of Peter getting ready to practice welding stainless steel.

![Figure 4: Peter practicing welding.](image)

After practicing and perfecting techniques of welding, it came time to weld the pipes to the feet. The process and setup for each pipe was very slow moving. Figure 5 shows a completed welding job.
However, job was not completed yet. During the welding process, the plate gets so hot at times that it melts and warps (curves) so it is no longer a flat plate. The solution to this problem is to pound out the curves with hammer and vise. At other points, the metal gets so hot that it bubbles out on the side of the plate opposite the pipe. The solution to this problem is to sound down the bubbles with a disk grinder. Figure 6 shows this phenomenon.
Figure 6: Bubbles formed on foot from welding and bubbles grinded down, respectively.

Figure 7 shows a completed welding job with both ends of the pipes having feet on them.
Figure 7: Completely welded leg of standing gardener.

Hours worked this week: 14 ½

Future work: Finish welding and mapping out where the legs will go in relation to the plates for the table of the standing gardener.