

EWH Aspirator

Client: Dr. John Webster

*Team Members: Nick Harrison (Communications)
Jonathan Meyer (BWIG)
Lucas Vitzthum (Leader)
Fan Wu (BSAC)*

Nov 10- Nov 23

Progress Report #9

Problem Statement

The objective of this project is to design a suction machine that can be manufactured from locally available materials with the ability to run off batteries, electrical power (when available) or human power. This device should provide the broadest range of possible applications while still remaining under the 100\$ price limit.

Last Week's Goals

- Continue with diaphragm design
- Refine bellows design-make more durable
- Create coat-hanger rigid members

Summary of Accomplishments

- Constructed piston with rubber seal from PVC piping
- Constructed two rigid arms from coat hangers for piston design. Also constructed a linear two hole device to allow only linear movement out of a syringe
- Talked with new client. Identified suction power as most important aspect of device.

This Week's Goals

- Finish piston design and begin to test device
- Continue exploring bellows design as a possible replacement for the diaphragm
- Refine bellows design-make more durable
- Create coat-hanger rigid members
- Show Professor Fronczak current development

Project Timeline

Tasks	September				October				November				December		
	7	14	21	28	5	12	19	26	2	9	16	23	30	7	14
Project Research and Development															
Contact EWH	█	█													
Apply for funding			█	█											
Research		█	█	█	█	█	█	█	█	█	█				
Brainstorming		█	█	█	█	█	█								
Design Prototype			█	█	█	█	█								
Test Prototype							█	█	█	█	█	█			
EWH instructions							█	█	█	█	█	█			
Website		█	█	█	█	█	█	█	█	█	█	█	█	█	█
Deliverables															
Mid Semester Presentation						█	█								
Mid Semester Report							█	█							
Final Presentation													█	█	
Final Report														█	█
Progress Reports	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Meetings															
Semester Wrap Up															█

Activities (Two Weeks)

Lucas:

Meeting with advisor (1 hour)

Weekly meeting (2 hr)

Constructed two rigid members from coat hangers (1 hour)

Met as a group to build piston design (4 hours)

Meeting with client (2 hours)

Total: 10 hours

Fan:

Meeting with advisor (2 hours)

Attended BSAC meeting (1 hour)

Meeting with client (2 hours)

Meeting with client (3 hours)

Met as a group to build piston design (4 hours)

Total: 12 hours

Jon:

Meeting with advisor (2 hours)

Constructed bellows prototype (2 hours)

Updated Website (1 hour)

Meeting with client (2 hours)

Meeting with client (3 hours)

Met as a group to build piston design (4 hours)

Total: 14 hours

Nick:

Meeting with advisor (2 hours)

Meeting with client (2 hours)

Meeting with client (3 hours)

Met as a group to build piston design (4 hours)

Total: 11 hours