

Helping Hand Walker

Project Progress Update

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Safety Research

Proper techniques

- With limited strength, if the user lifts them self-up it could lead to further issues.
- The normal aging process causes the body to lose muscle mass (sarcopenia).

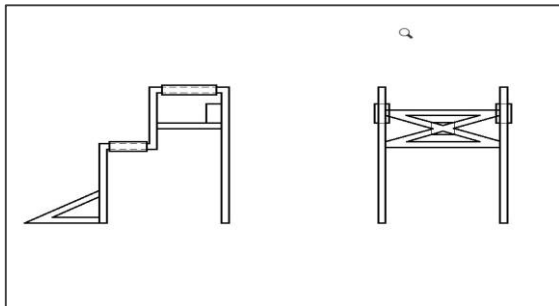


Load Research

Meeting with Mechanical and Electrical workshops

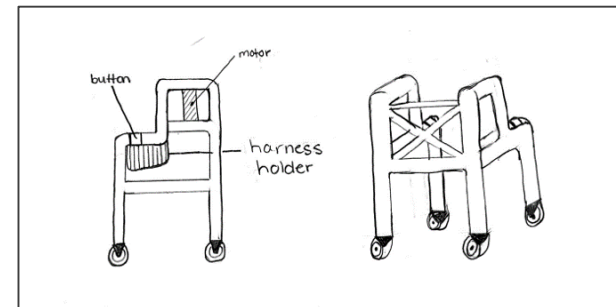
Mechanical Workshop

- Discussed constructing a full-scale prototype.
- Small scale design (utilize an Arduino motor as lifting system)
- 3D Parts, Arms, Wheels



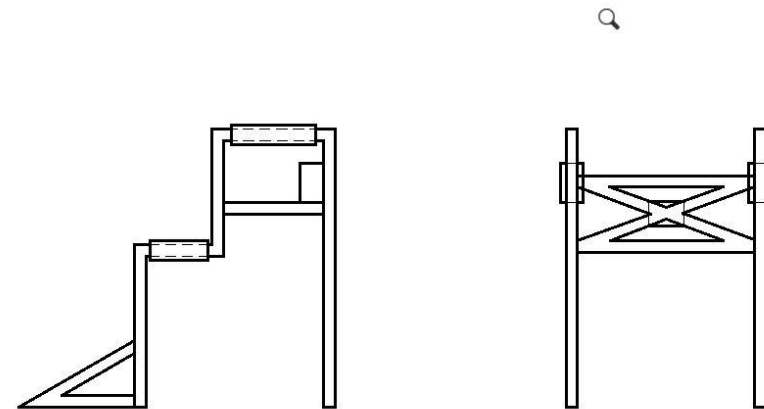
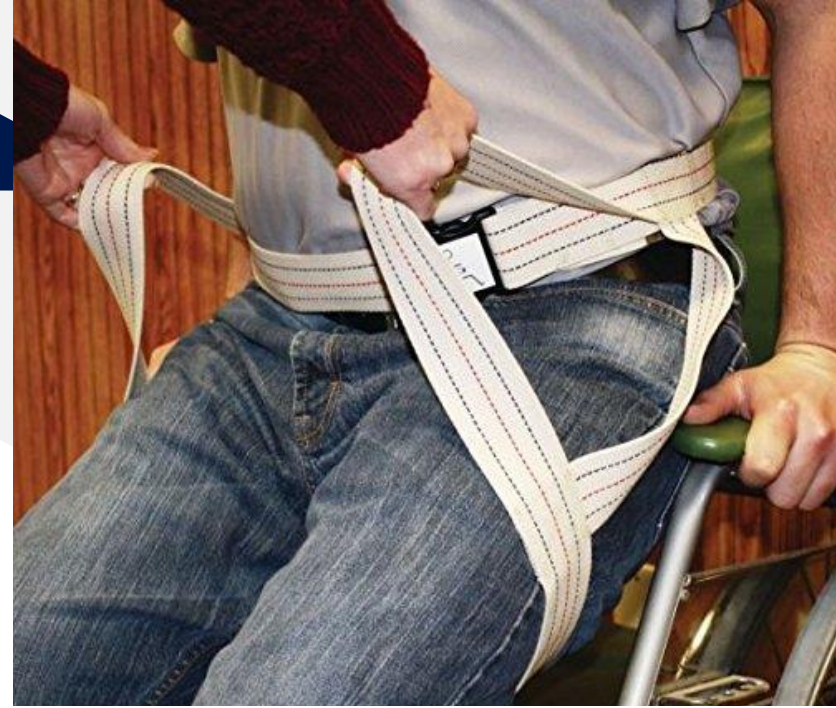
Electrical Workshop

- Discussed our project.
- Brainstormed possible solutions.
- Geared motor step motor.
- Need to complete our torque calculations to decide what size motor and battery is needed.



Design Update

- Kickstand supports at back of walker.
- One motor or two motors?
- Lifting harness and nylon straps.
- How to deal with the added weight.



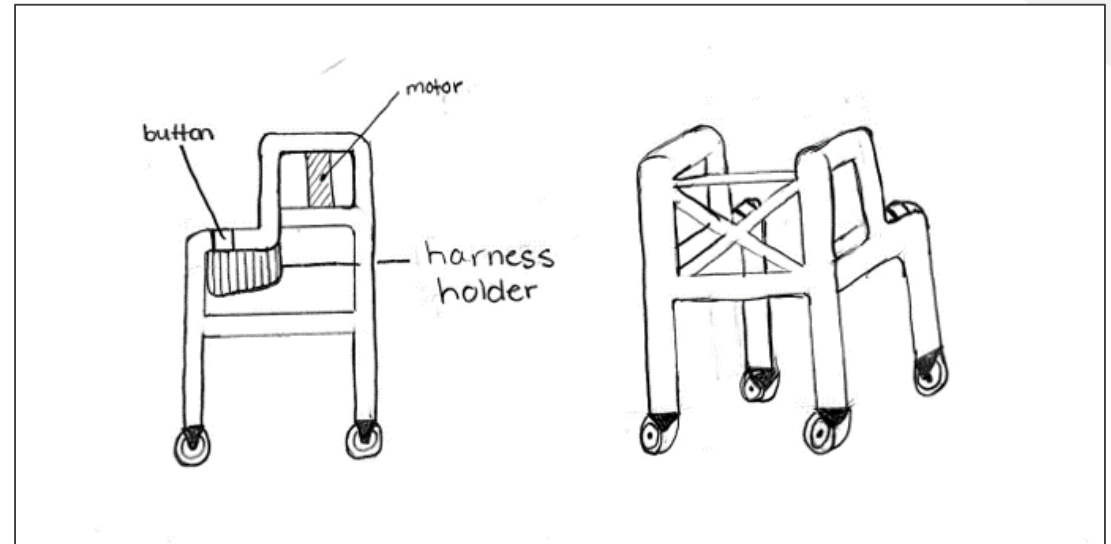
Website Update

- Update layout to website
 - Adding Home Page
 - Contact
 - About Us
 - Reports
- Easy to access
- Overall look, professional



Difficulties & Overcoming

- Making the product user friendly for people who struggle with arthritis, who don't have much upper body strength and low mobility.
- Finding a way to add more stability when lifting.
- Trouble contacting a nursing home.
- Finalizing design concept without firsthand feedback from patients and care takers.
- Difficulty communicating over the break.



Original Design Sketch
"Helping Hand Walker"

Upcoming Meetings / Timeline

- Occupational Therapist: March 9th
 - To discuss how to properly lift an individual with low mobility issues and to comment on our current design.
- Nursing Home: TBD
 - To ask care takers and residences a variety of questions regarding the Helping Hand Walker
- Visit with Craig Seaboyer (Electrical workshop): TBD
 - Once we get our torque calculations done, we'll get advice for what type of motor is best suited for this project.
- Final design briefing with Occupational Therapist and Nursing Home residences: TBD
 - To get final comments on improving our product.



Thank You.



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<https://people.stfx.ca/engr/DesignProjects/2020/Group7/Website/welcome.html/>