

The Wheelchair Helper

Blue A

Motivation

- In 2003, over 100,000 wheelchair related injuries were treated in emergency departments in the U.S.
- Transfer mishaps = 2nd leading cause of these injuries

Xiang, H., et al. "Wheelchair related injuries treated in US emergency departments." 2005. <
<http://injuryprevention.bmj.com/cgi/content/full/12/1/8>>

Customer Need

“Transferring patients in and out of wheelchairs is backbreaking work.”

--Rehabilitation Center Nurse

Existing Products

Multi-Lift from Accessibility Unlimited



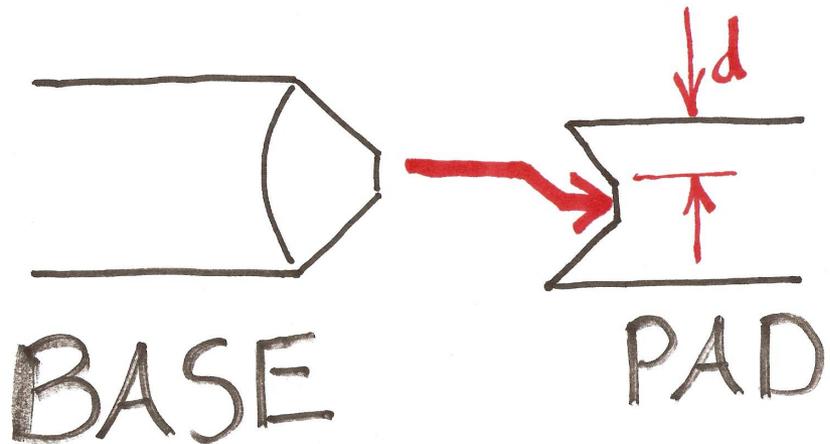
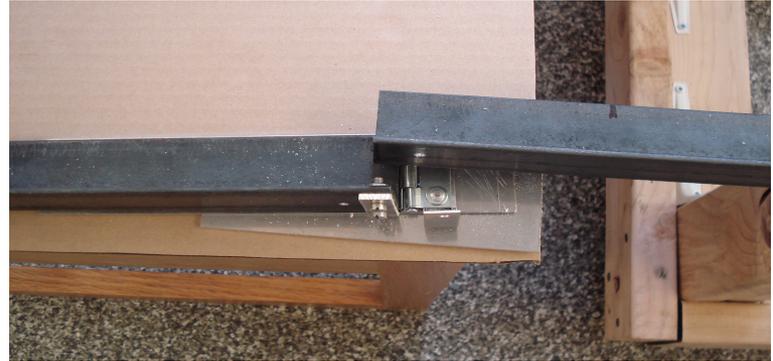
Cost = \$4,625.10

Our Design



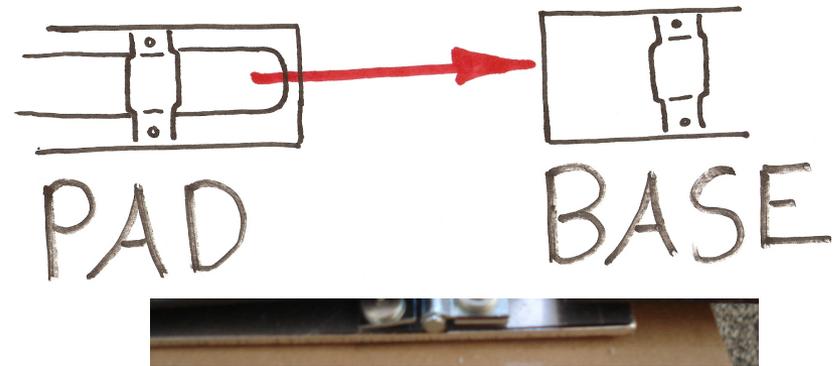
What We've Learned

- Alignment of main base with pad is difficult
- **Solution:** Increase the allowed margin of error when aligning

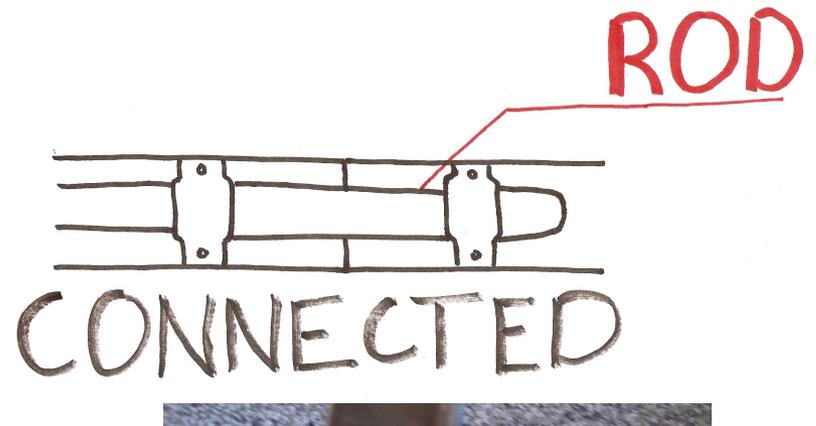


What We've Learned

- Connecting base to pad needs to be quicker and easier



- **Solution:** Sliding rod to attach tracks



What We've Learned

- Current tracks are a safety hazard
- ***Solution:*** Change track material and shape
- Currently, caregiver needs to bend down to operate
- ***Solution:*** Add vertical handles



The Wheelchair Helper

Enhancing the safety and mobility the wheelchair transfer process for the disabled and caregivers alike

Any Questions?

