



NORTHERN  
ARIZONA  
UNIVERSITY

# Assistive Holder for Disabilities

Team D4

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Mahdi Alajmi

# \*Project Description

- **Main Idea:**

- Make a device that has different ways to help the disabilities.
- Give disabilities an opportunity to have easier live.
- With this device, disabilities would help themselves without anyone else.

- **Sponsor:**

- Hozhoni Company

- **Client:**

- Terri Engel

# \* Background

- Muscle problems.
- Hard movement.
- Issue picking up.
- Old art's material.



[1]

# \*Benchmarking



[2]

Hozhoni Assistive Holder



[3]

Oct 3<sup>rd</sup>,2017

Mahdi

# \*Customer Requirements

- Safety
- Size change
- Light weight
- Angle change
- Easy to set up
- Easy to use

# \*Engineering Requirements

- Edges round to 3mm
- The weight less than 1Kg.
- Applied pressure 5kpa
- The opening angle is 180 degrees.
- The length is 70cm
- The estimate cost (200\$-300\$)

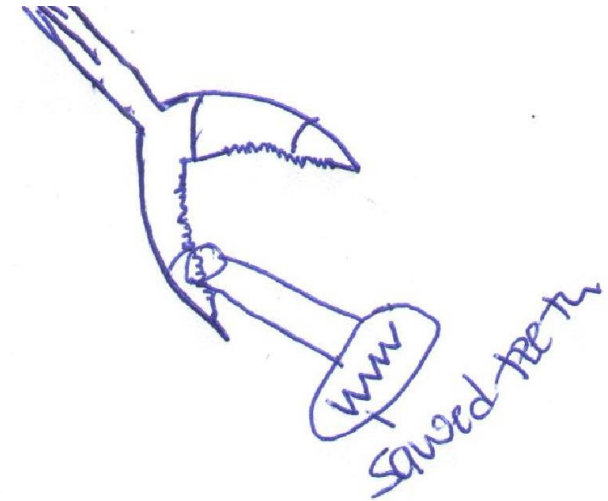
# \*Design Considered #1

## **Advantage:**

- help to hold different parts.

## **Disadvantage:**

- it might damage some parts.

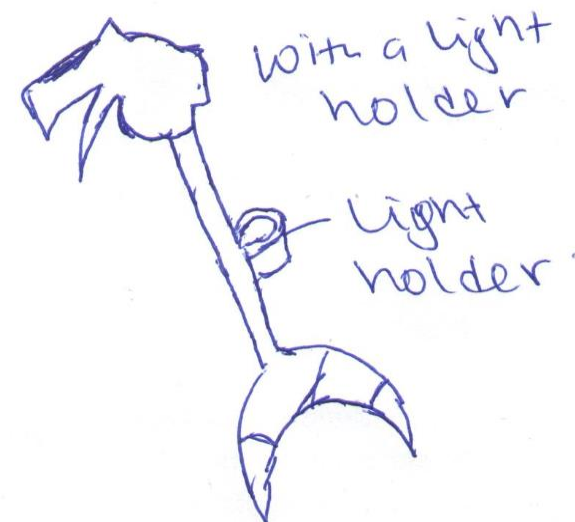


## **Advantage:**

- Can use on dark

## **Disadvantage:**

- Cannot hold heavy weights



# \*Design Considered #2

## **Advantage:**

- Spring on opening makes it easier.

## **Disadvantage:**

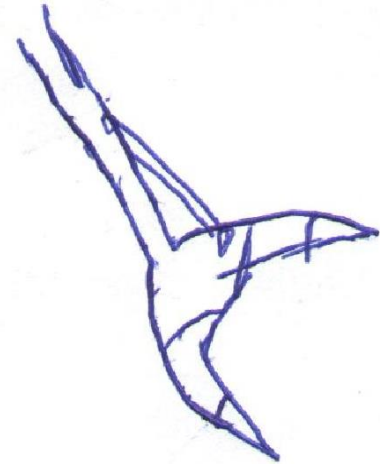
- With the time the spring damages .

## **Advantage:**

- can hold hang buckets and anything similar.

## **Disadvantage:**

- cannot hold everything.





# \*Budget

- Our budget is 2000\$.
- Total cost
- Funding source: Gore
- Estimate cost (200\$-300\$)
  - Building design 75%
  - Prototype 10%
  - Shipment 15%



# \*Schedule

TASK	NAME	September				October				November			December	
		4th-10th	11th-17th	18th-24th	25th-30th	2nd-8th	9th-15th	16th-22nd	23th-29th	6th-12th	13th-19th	20th-26th	27th-3rd	4th-11th
<b>Background Research</b>	TEAM	[Red]												
Introduction	Mohammad	[Pink]												
project description	Saud	[Black]												
client meeting	TEAM			[Red]										
staff meeting	TEAM		[Red]	[Red]										
<b>TEAM MENITUE</b>	TEAM			[Red]					[Red]	[Red]				
gantt chart	Hamad		[Blue]	[Blue]										
CNs	Mahdi		[Green]	[Green]										
Engineering Requirments	Mahdi / Saud			[Red]										
House of Quality	Mohammad/Hamad				[Red]	[Red]								
<b>Presntation 1</b>	TEAM				[Red]	[Red]	[Red]							
<b>Primirally Report</b>	TEAM		[Red]	[Red]	[Red]	[Red]	[Red]							
introduction	Hamad				[Blue]	[Blue]								
Project description	Saud				[Black]	[Black]								
Clirafy problem	Mohammad			[Pink]										
staff meeting	TEAM				[Red]	[Red]								
<b>Final Presntaion</b>	TEAM										[Red]	[Red]	[Red]	
<b>Staff meeting</b>	TEAM						[Red]	[Red]		[Red]	[Red]	[Red]	[Red]	
<b>Final Report</b>	TEAM							[Red]	[Red]	[Red]	[Red]	[Red]	[Red]	
BOM	Mahdi					[Green]	[Green]	[Green]	[Green]	[Green]				
Prtotybe	TEAM									[Red]	[Red]	[Red]	[Red]	
Final Design	Mohammad									[Pink]	[Pink]	[Pink]	[Pink]	
QFD(update)	Hamad						[Blue]	[Blue]	[Blue]	[Blue]	[Blue]	[Blue]	[Blue]	
Gantt chart(update)	Saud					[Black]	[Black]	[Black]	[Black]	[Black]	[Black]	[Black]	[Black]	
<b>Name/Color</b>														
Mahdi Alajmi		[Green]												
Mohammad Alajmi		[Pink]												
Saud Almutairi		[Black]												
Hamad Aldhafeeri		[Blue]												
Team		[Red]												

# \*References

- [1] Artists, H. (2017). *Hozhoni Art Studio - Individualized residential, vocational, and educational services primarily for people with developmental disabilities*. [online] Hozhoniartists.org. Available at: <http://hozhoniartists.org/> [Accessed 2 Oct. 2017].
- [2] Organizing, Y. and Jaws, P. (2017). Pik Stik Deluxe Reacher with Rotating Jaws | Yard Clean Up & Organizing. [online] Gardenersedge.com. Available at: [http://www.gardenersedge.com/pik-stik-deluxe-reacher-with-rotating-jaws/p/P324/?kc=geshop17n,&mkwid=sg1kIgVoQ|dc&pcrid=60345002936&pkw=&pmt=&plc=&prd=P324&gclid=EAIAIQobChMI\\_-XJ98vT1gIVhgOGCh1YwwNyEAQYCyABEGK15vD\\_BwEsearch.webfinderresults.com/?\\_pg=7395199C-45A2-528B-89B6-22284E77028B&affid=A010P\\_ext\\_bcr\\_T&type=t](http://www.gardenersedge.com/pik-stik-deluxe-reacher-with-rotating-jaws/p/P324/?kc=geshop17n,&mkwid=sg1kIgVoQ|dc&pcrid=60345002936&pkw=&pmt=&plc=&prd=P324&gclid=EAIAIQobChMI_-XJ98vT1gIVhgOGCh1YwwNyEAQYCyABEGK15vD_BwEsearch.webfinderresults.com/?_pg=7395199C-45A2-528B-89B6-22284E77028B&affid=A010P_ext_bcr_T&type=t) [Accessed 2 Oct. 2017].
- [3] Medicalproductsdirect.com. (2017). Reacher, EZ Assist Reacher - 32" - Reachers and Accessories. [online] Available at: <https://www.medicalproductsdirect.com/reezasre32.html> [Accessed 2 Oct. 2017].



Thank You

Questions?