

Solutions in complex mount making for heavy unbalanced objects, requiring mastery in different mount types & materials. 2 objects, 2 mounts each.



Ceramic Tile

13<sup>th</sup>

Century

Iran

Stone

paste with

glazed

surface,

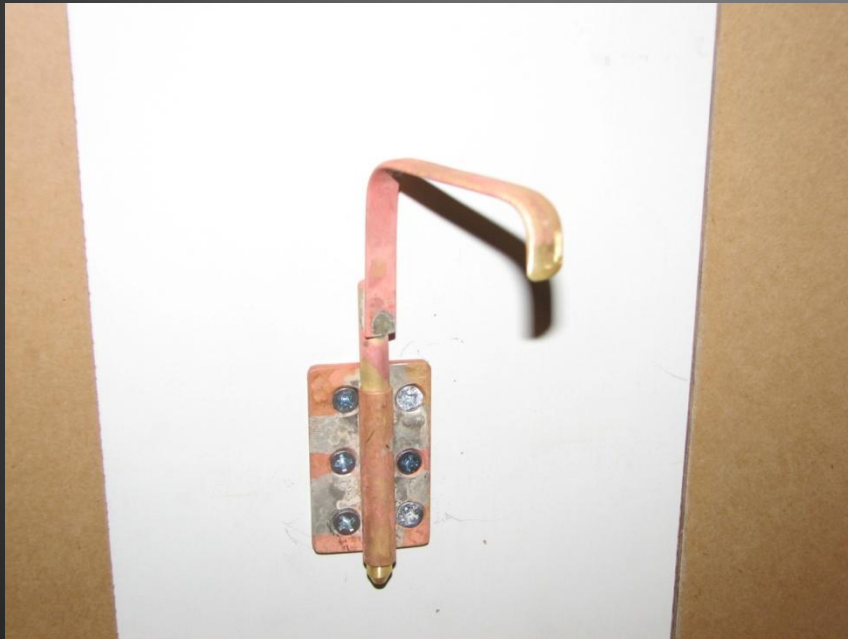
(100 + lbs)



It was decided the tile needed, two mounts, each of different materials.

Top mount, several, brazed brass. 2 part assemblages.

The base mount, epoxy resin prosthesis.

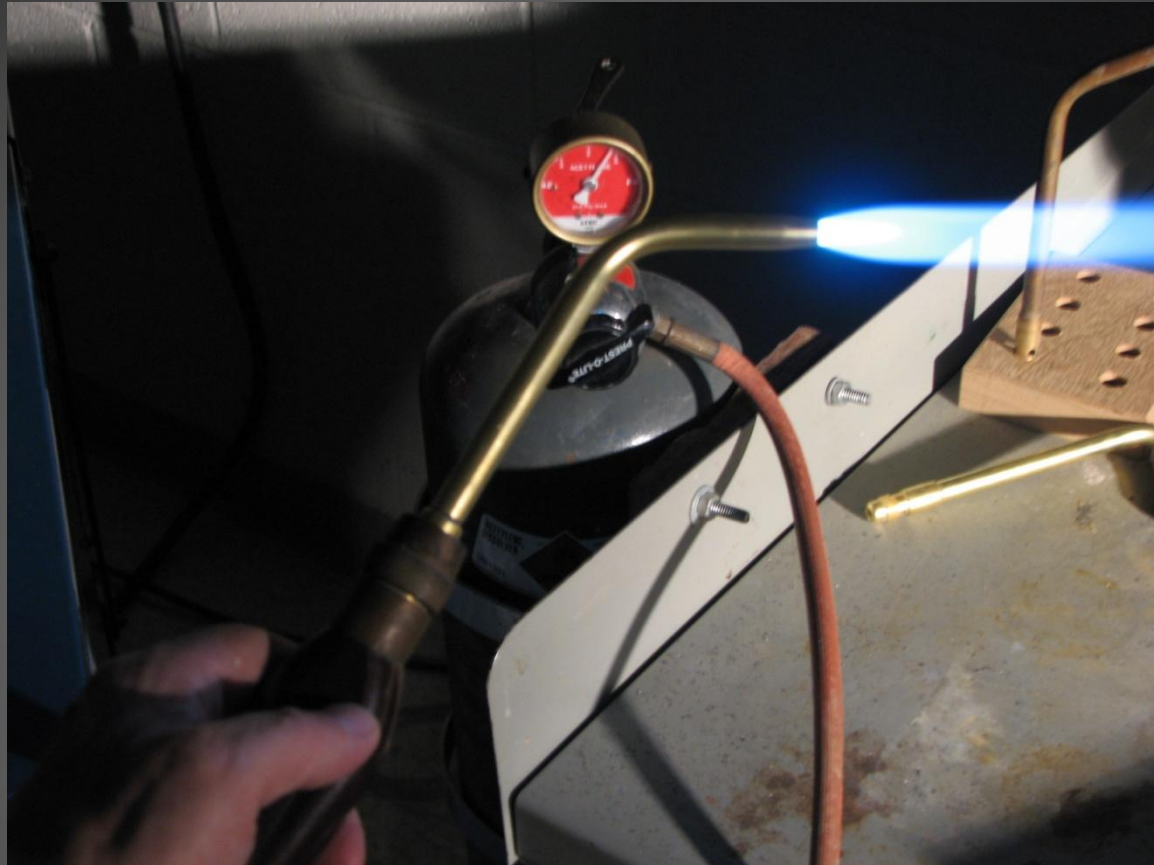




Milling and sanding the brass stock

# Cutting selected mount pieces





Brazing with air acetylene



Heat metal on a fireproof surface, add the flux, reheat

# Brazing

Add the silver solder into the heat & flux.

When melting it will look liquid, like mercury.



## 2 part mounts

Measure & compare object contact points using paper or other flexible insert material.

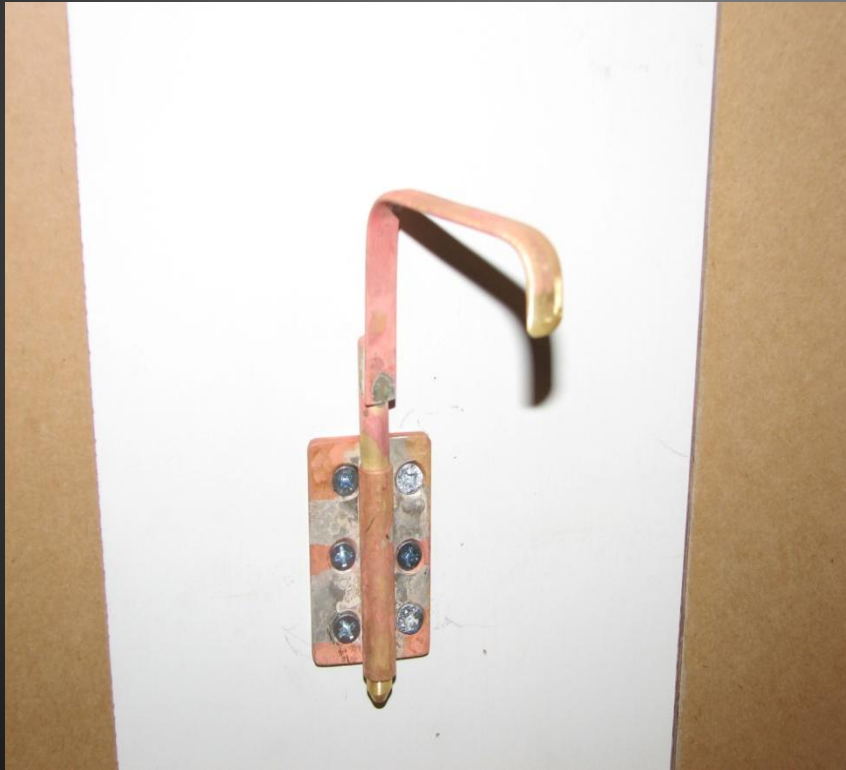
2 part mounts allow for adjustments.



# Transform the mount into something safe and attractive

**Preliminary adjustments**

**Add conservation approved  
materials like, protective  
acrylic felt, & paints.**



A solid support for the artwork was created.

Twin top mounts tested & installed.

A template was made. The top mounts would be used in the creation of the base prosthesis.



## Prepare object for base interface mold impression.

Using conservation approved interface material, provide protective barrier, (i.e., polyethylene), for both the object and the support well while interface prosthetic material cures. Inspect artifact and setup to detect any binding undercuts or breaches in protection, a thick poly ply helps, (4mil).



# Approved interface material



**Prepare and mix mold material.**

**Anticipate set up  
time & mix.**

**Support frame for  
setting & non stick  
preparation.**



The object was lowered onto mold material, & was made level with acrylic shims. More material was added. The top twin trap mounts were aligned with the help of the template.



# Prosthetic shim was shaped, painted & attached to case component

Shape interface material using mechanical action and skills.

The Painted prosthetic interface was screwed to the buildup.



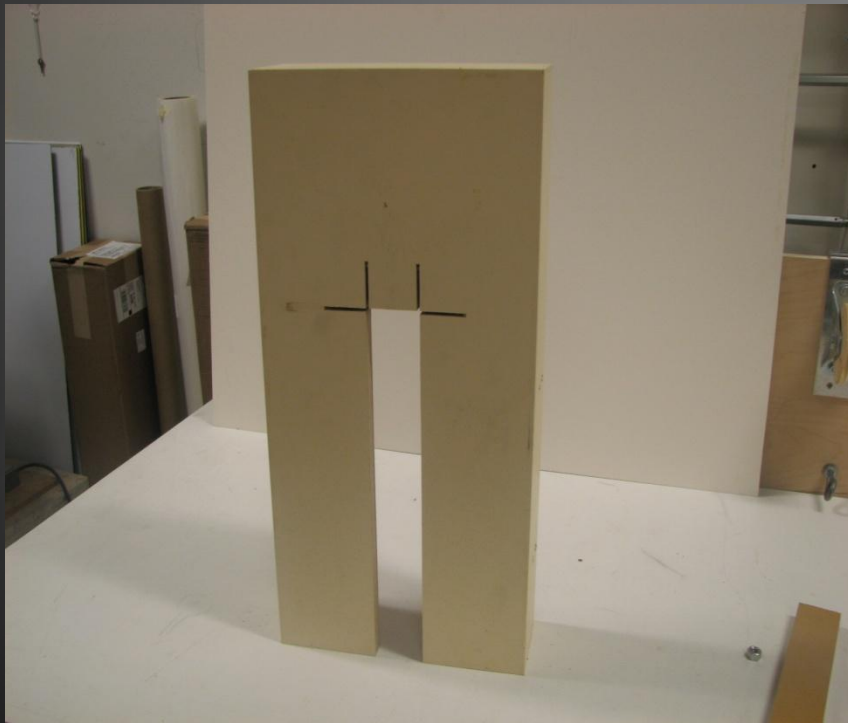
Using matching ideas & having fun  
creating a unique footprint.



# Securing a wall buildup, using a trick that you cannot see.

Cut a sliding track in the back of the 4 sided buildup

Fabricate a T shaped wall support that fits into the sliding track of the buildup.





The back of the buildup where the sliding track is cut, slides down over the T shaped wall support adding a third component of stability that insures the attached prosthetic interface shim and the weight of the object will not alter the placement of the buildup.

## Complete object stability for a heavy 13<sup>th</sup> Century artifact.

The twin trapping brass mounts, work in cooperation with the secured interface support prosthetic shim. The interface shim is screwed down into a buildup that is locked securely to a T shaped wall support and the buildups sliding track. The mounting arrangement insures stability during exhibition and establishes secure levels of seismic mitigation.



# Joining the Smithsonian Exhibitions



Object number 2  
The African “BWA” Mask



Burkino Faso Africa

**Serpent Mask**  
Early - mid 20<sup>th</sup>  
Century, worn in  
ceremony,  
community events,  
& funeral rites.

Accompanied  
often to music  
flute & xylophone

(13' 9", 165 inches)





**Base mount, 1.) Stainless steel, TIG welded wall support mount, w/ sliding stainless support axle.**

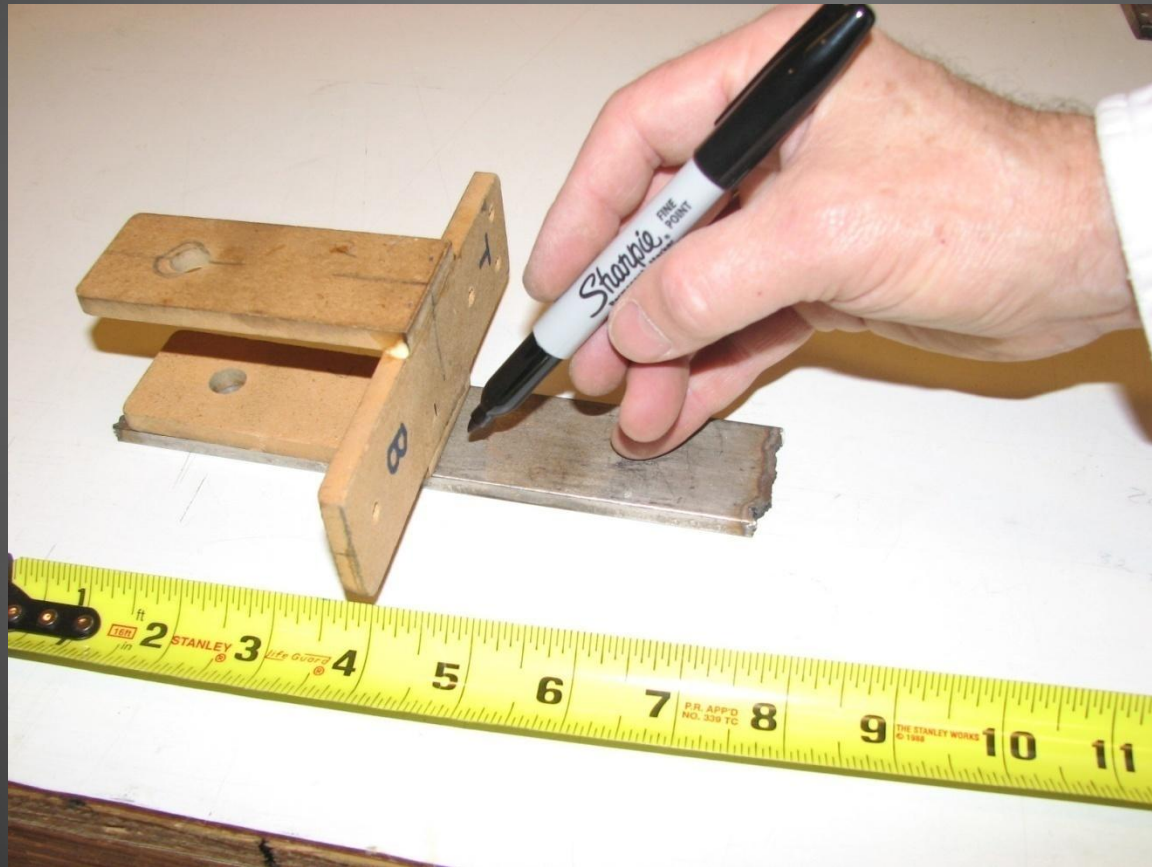
**Top mount, 2.) Brass, Air acetylene, brazed tap & die, 360o locking.**

**Motion prevention wall mount.**

First, design and fabricate the prototype for the stainless mount.



Fit the prototype mount to the object and make it a template for measuring stainless components. Prototype should match steel stock.





## Plasma Cutting System & Air Compressor

A working knowledge of metal cutting systems will greatly improve the ability to cut many stainless components rapidly.



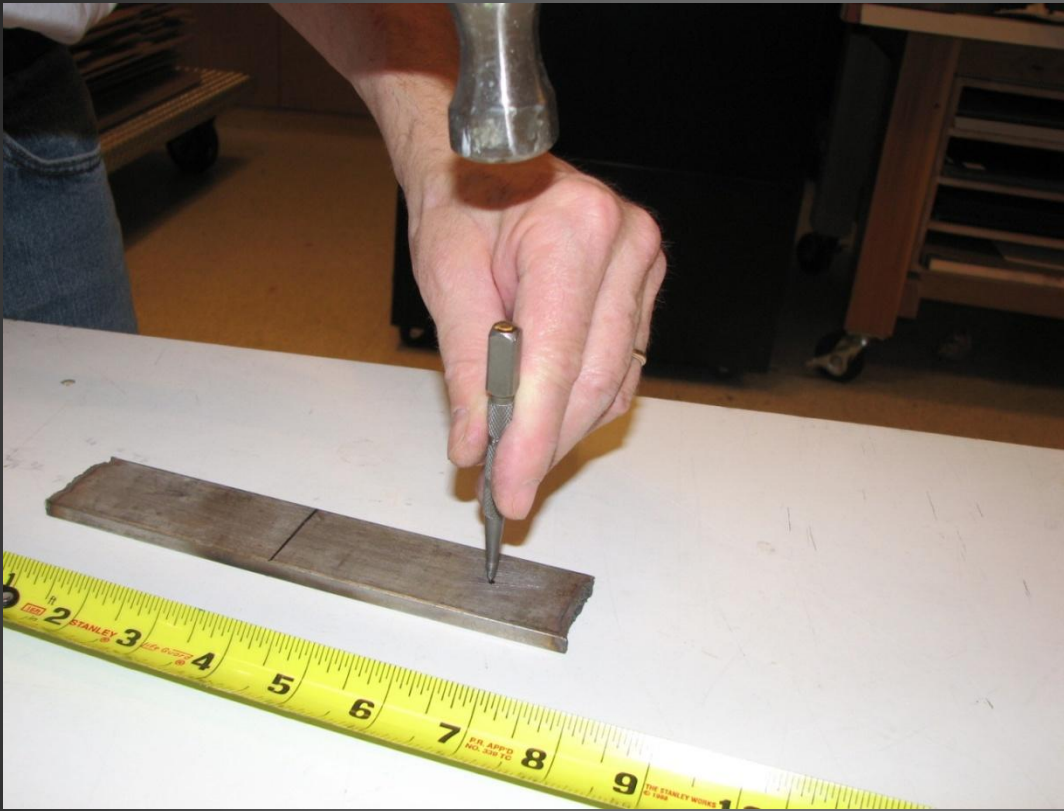
**Wear safety equipment, & Welding helmet.**  
**Clamp positive clamp to metal work.**  
**Touch the tip connecting the electrode and aim the handle away from you.**

The tip & electrode touch the metal & the ionized gas is heated to plasma and the pressure from the compressor pushes the plasma through the work.





**Cutting the  $\frac{1}{4}$  inch  
stainless steel in half is  
no problem**



To drill stainless, a punch is needed to make a starting point for the twist drill bit.

Set the drill speed at a low RPM & clamp the work, and wear safety goggles.



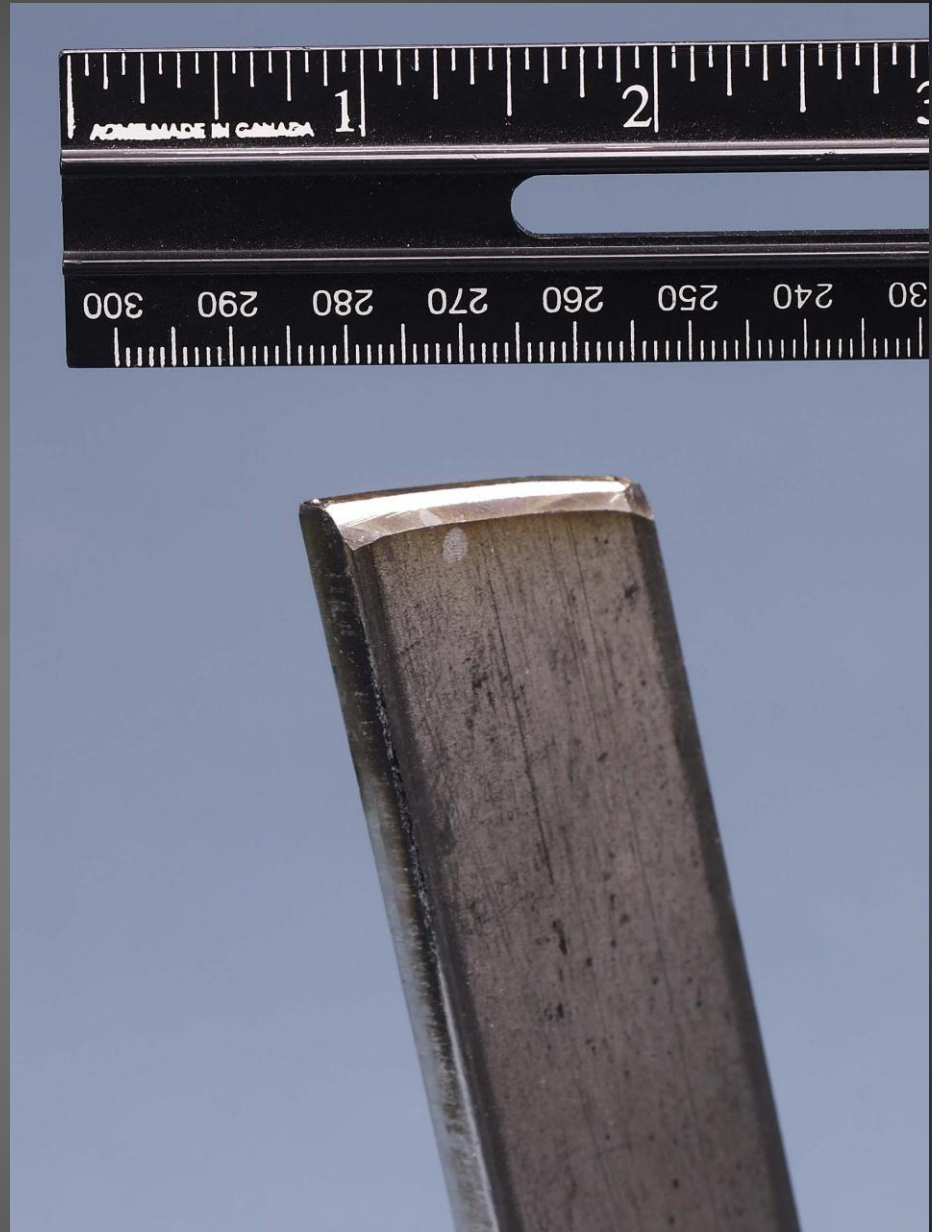
# Excellent Drilling Dude!



Grind away & shape flat surfaces,  
edges & welding bevels.



**Bevel stainless  
steel edge  
before  
connecting  
with TIG  
Welding.**



TIG:  
Tungsten  
Inert  
Gas  
Just a few  
Highlights



This is TIG through the Helmet



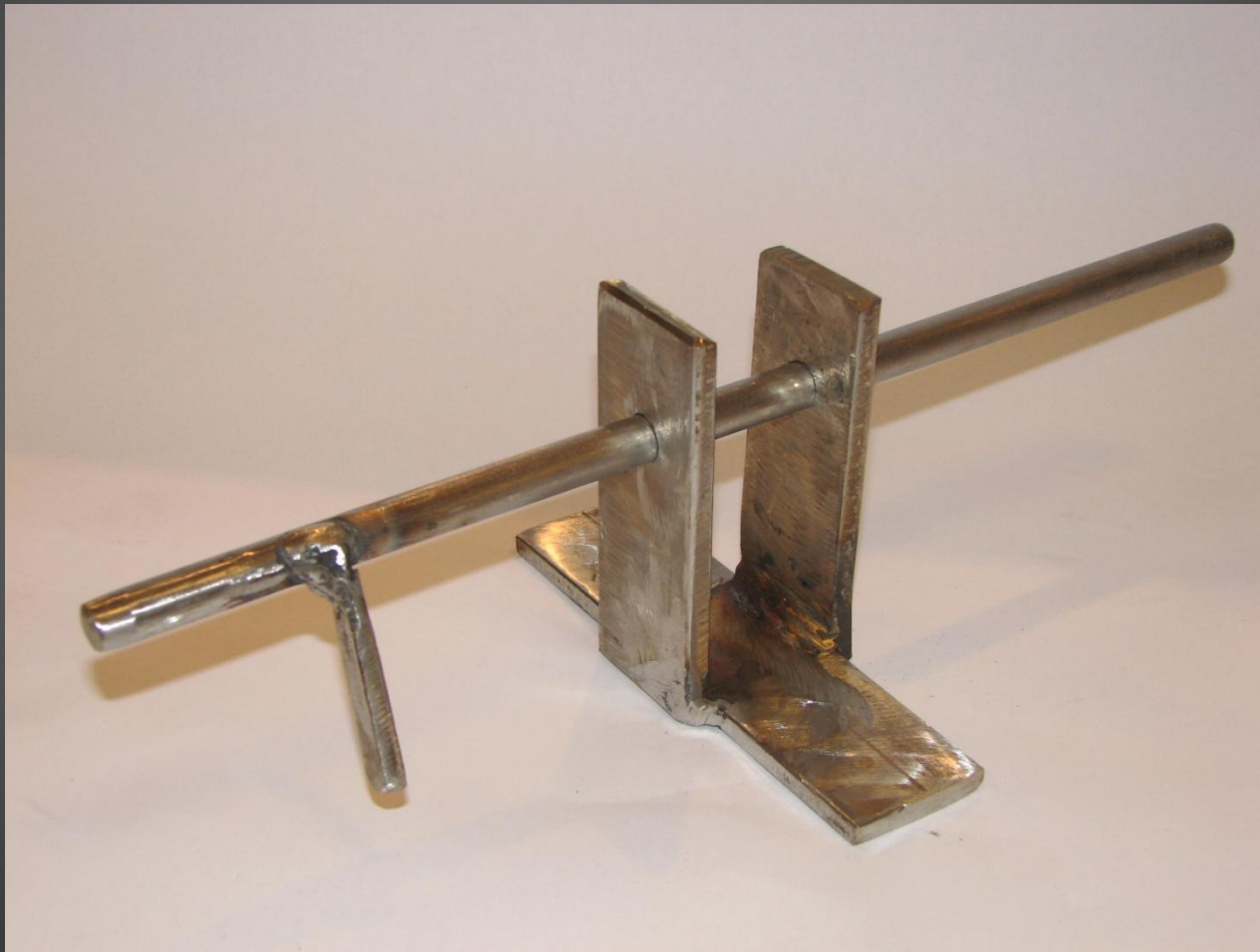
# Beginning TIG, The Tungsten Electrode in action



Molten Stainless joins the metal at the molecular level.



# From prototype to stainless mount



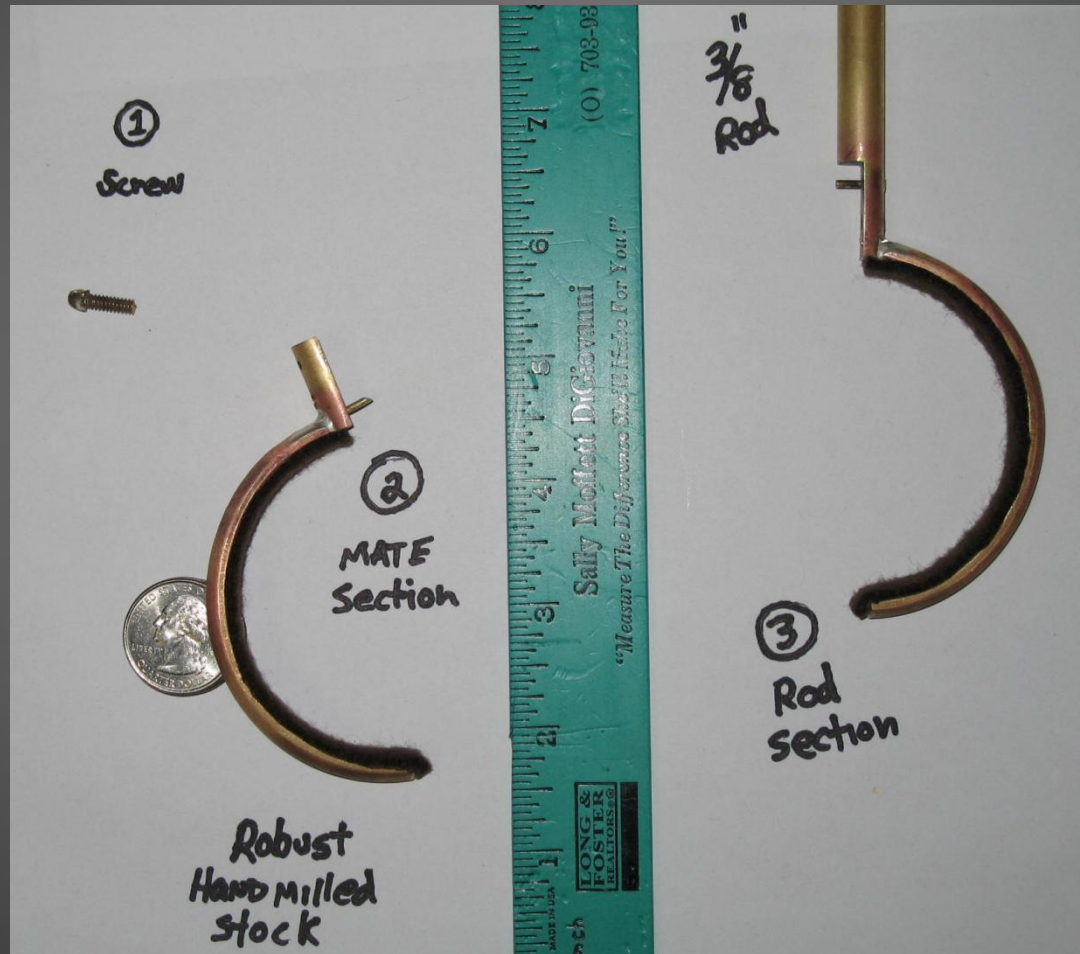
# Stainless bottom mount, heavy duty support



BWA mount #2, Brazed brass, 360o  
tap & die wall mount.



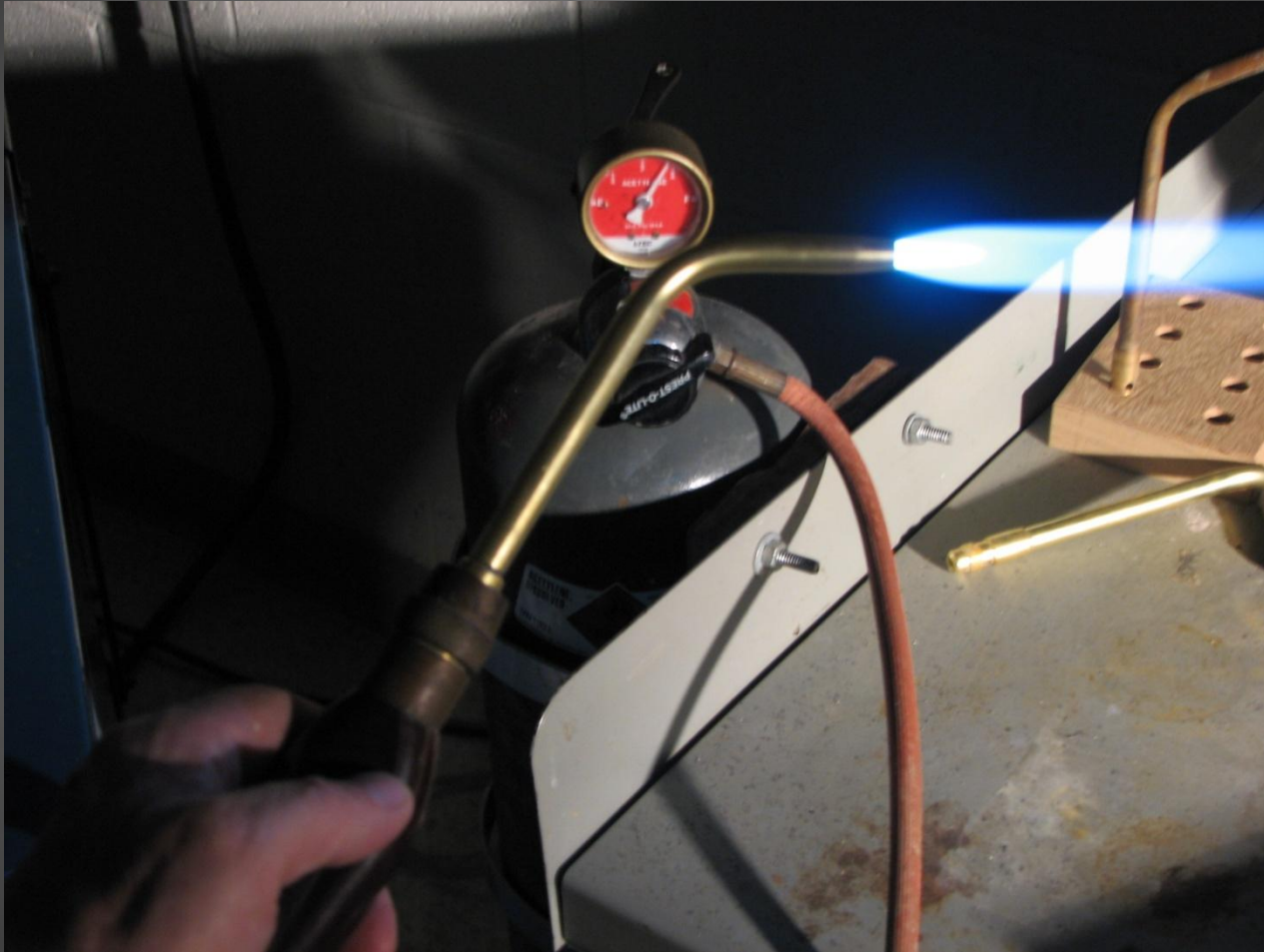
- 1.) Screw (die)
- 2.) Mate section
- 3.) Tapped rod section



Again, mill & cut the stock



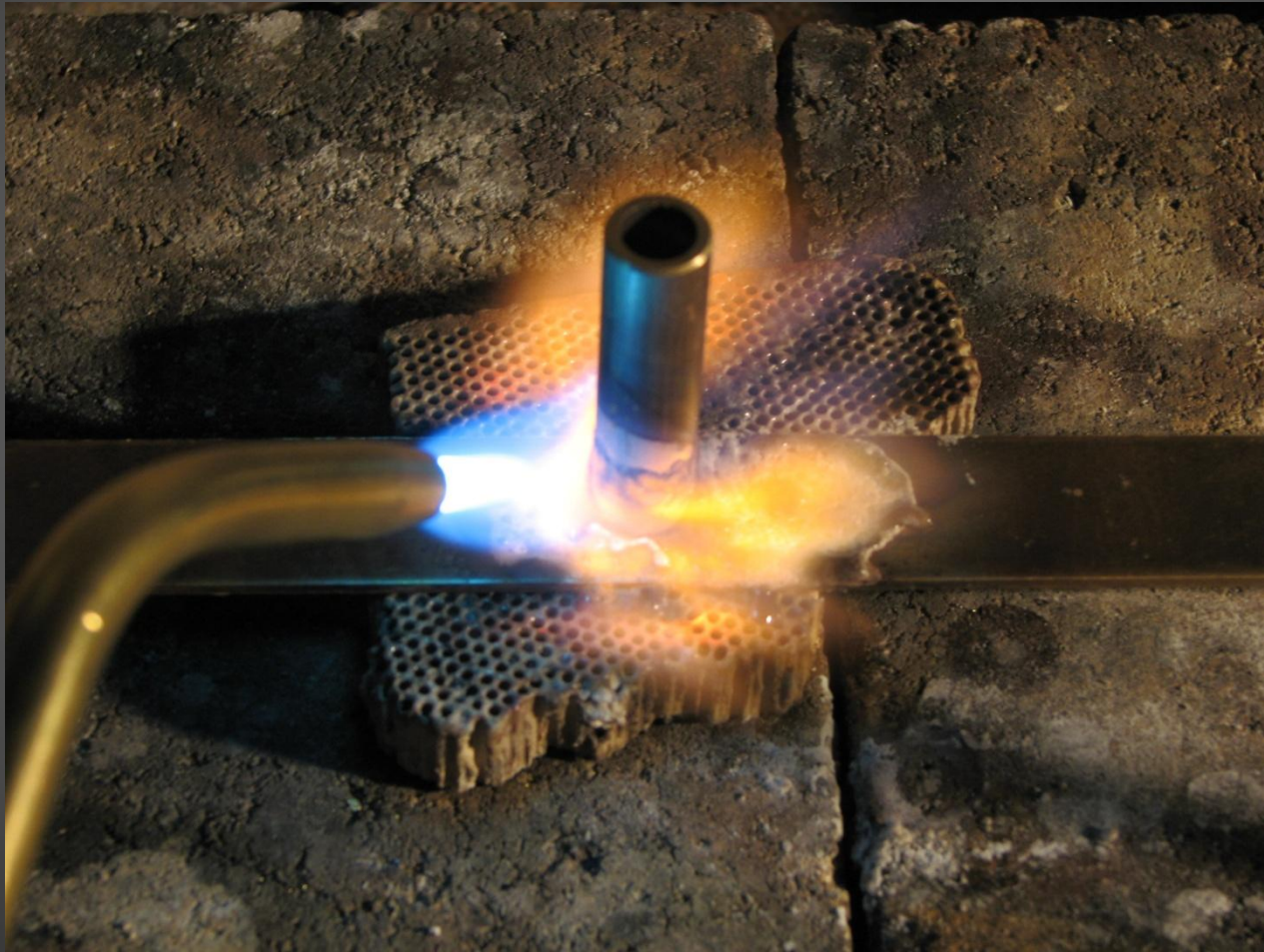
# Brazing & tank set up



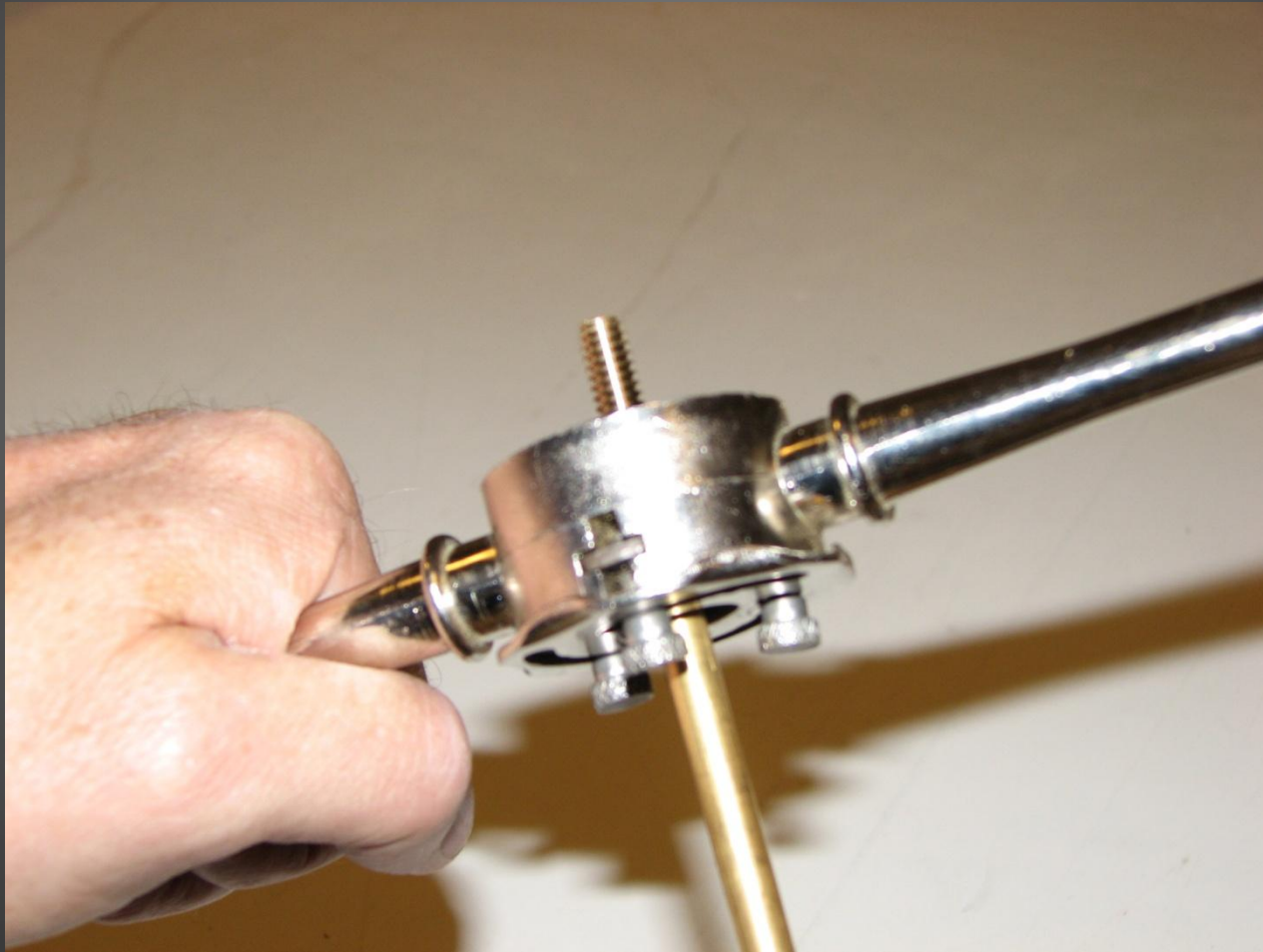
# Heat, add flux & reheat



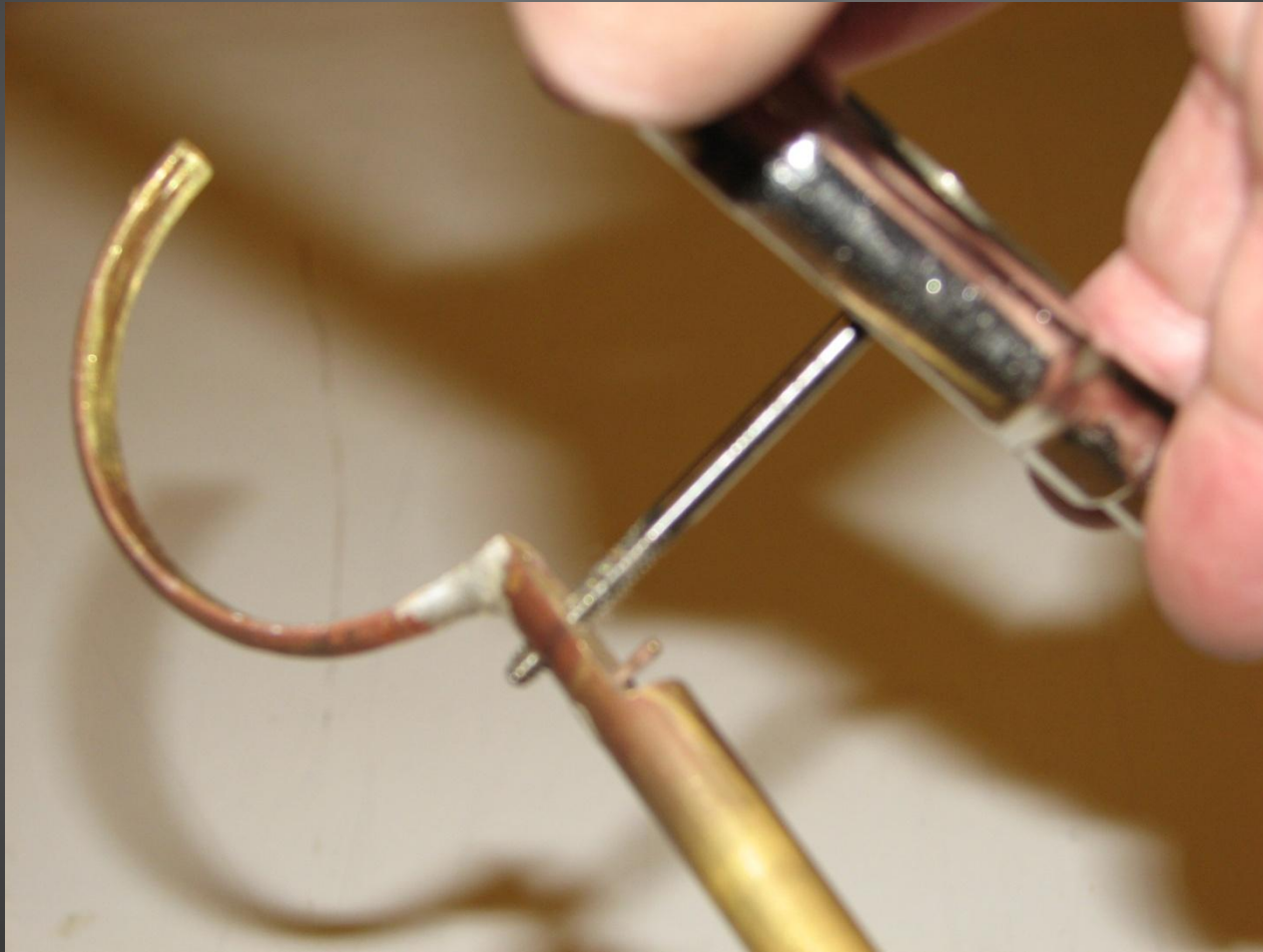
Add silver solder and heat, the liquid metal looks like mercury



# Die threading for homeade screws



# Tapping the rod section for threaded screws



# Test the mount during the Holidays!



Brass 360o mount in action,  
supports the top of Bwa



# Careful handling by NMAfA team



Once placed, the mounts are installed



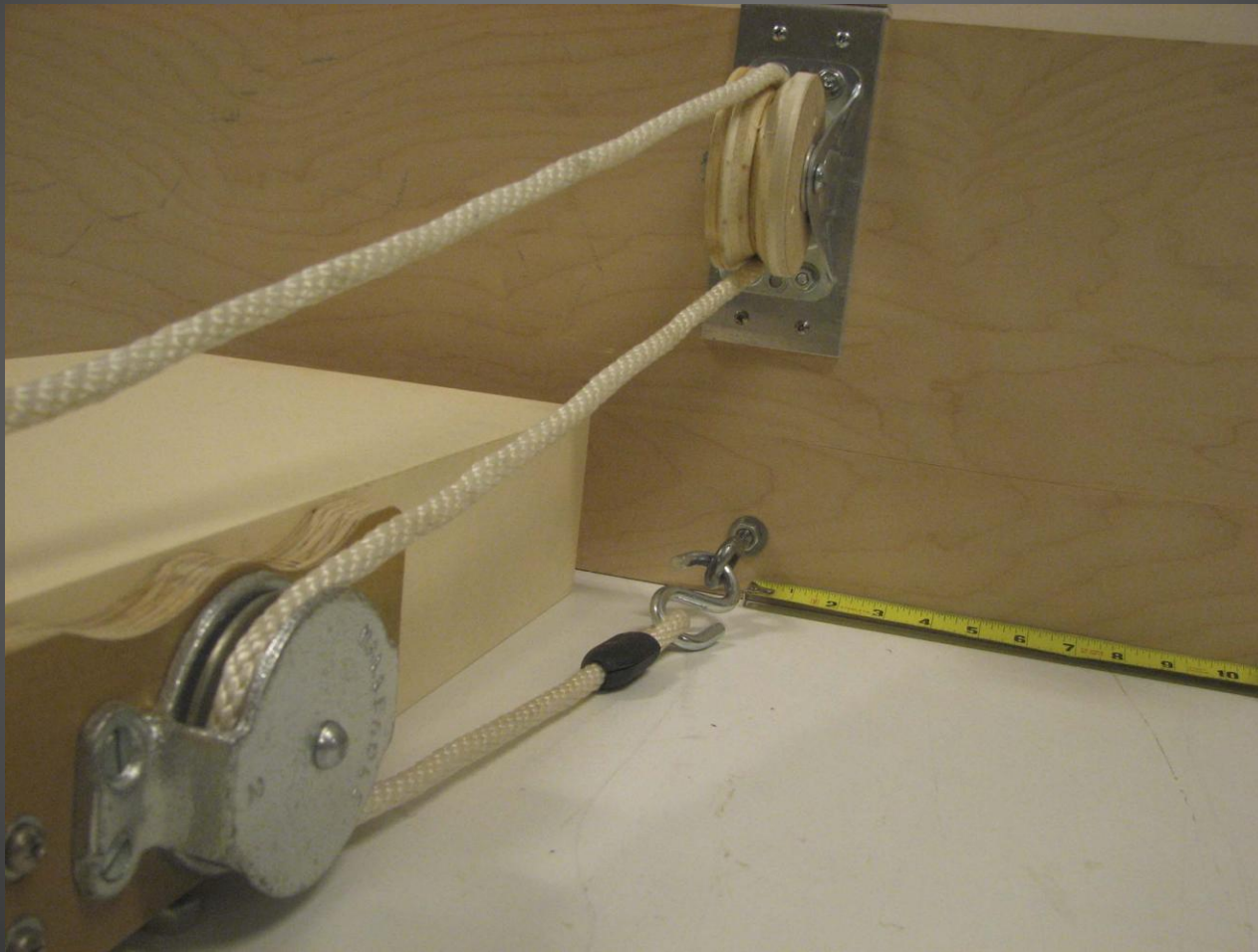
# The installation procession



# The NMAfA team, pulleys, lifts, & marine ropes.



# The Pulley and rope system



The team  
on the lifts  
guide the  
panel & Art,  
onto the  
hanging  
cleats



# View of the mask from lift above



# Bwa Mask

National Museum of African Art

