



# Tall Vise Workshop

19June2021

Host: Phil S

Instructor: pop-pop

## Participants:

danmart77

Danny Batchelor

drw

FredP

Graywolf

JohnnyR

Michael Mathews

RedBeard

This is the vise  
completed by  
Michael Mathews:



The following pages  
are a suggested  
build sequence and  
drawings for the  
various vise parts.



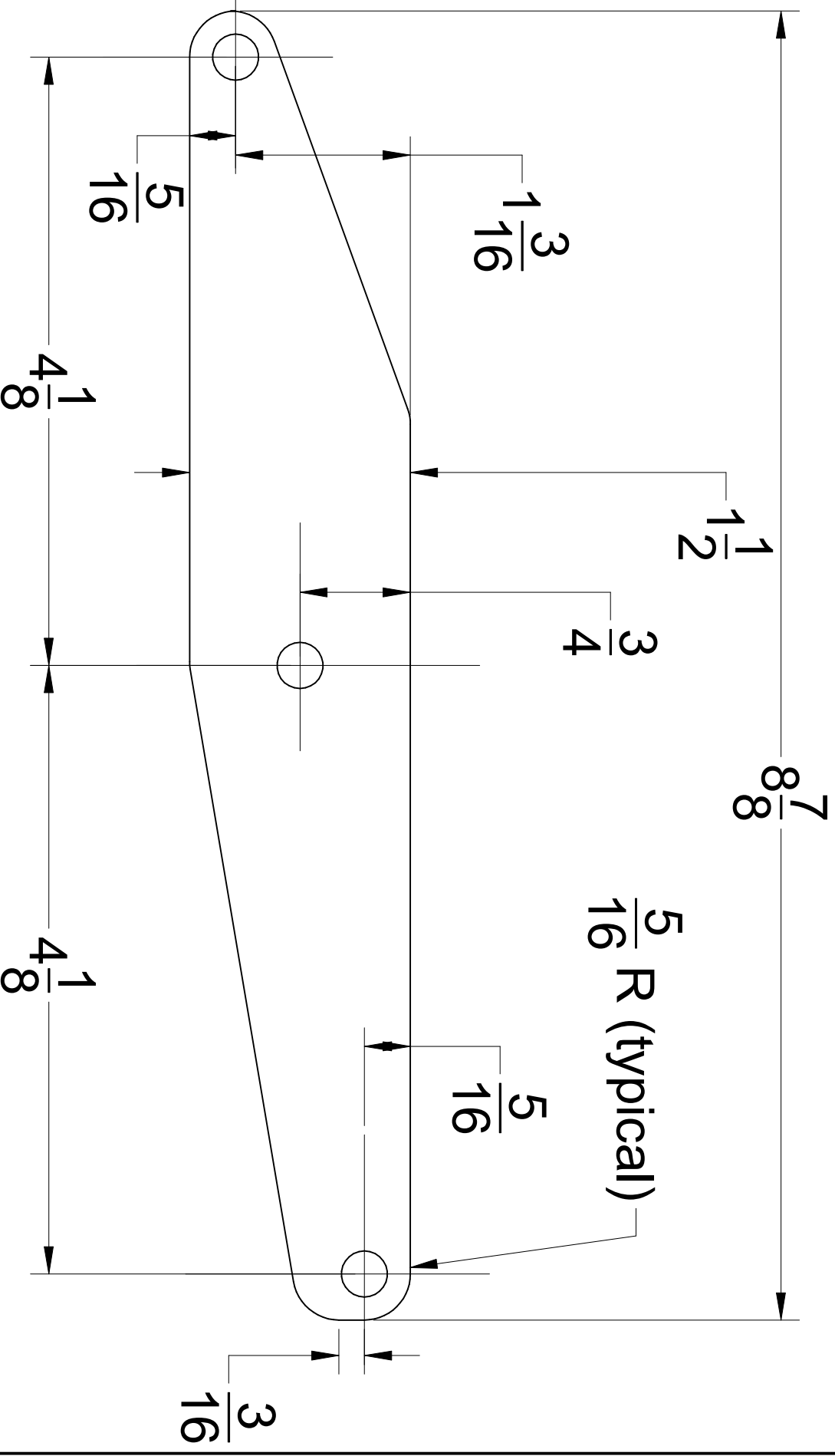
# Vise build sequence

Note: In the workshop, I prepared the individual metal parts and the participants prepared the wooden parts beforehand thus this sequence is modified accordingly.

- \_\_\_ Refer to NCWW-0001 and prepare the three aluminum X-cross arms.
- \_\_\_ Paint arms (if desired).
- \_\_\_ Refer to NCWW-0002 and assemble X-cross mechanism.
- \_\_\_ Refer to NCWW-0003 and prepare block and bracket. Note that “8/4” is whatever thickness that your 8/4 stock dresses to.
- \_\_\_ Refer to NCWW-0004 and prepare handle, two bearing plates, and three pins. Suggest brass, stainless, or plated steel for these metal parts.
- \_\_\_ Refer to NCWW-0005 and prepare vise screw and handwheel collars.
- \_\_\_ Refer to NCWW-0006 and prepare the wooden handwheel.
- \_\_\_ Fasten a spinlock collar into one handwheel recess with three #8 screws.
- \_\_\_ Thread the handwheel onto the screw, screw on the second collar, adjust for free movement, and fasten the second collar.
- \_\_\_ Refer to NCWW-0007 and cut leg blank to size.
- \_\_\_ If desired, mill chamfer or ogee to outside top of leg.
- \_\_\_ Carefully locate and drill cross pivot holes from both edges of leg.
- \_\_\_ Mill groove in leg. The width must clear the sex bolts and the depth must be accurate.
- \_\_\_ Refer to NCWW-0008 and cut chop blank to size.
- \_\_\_ Carefully locate and drill cross pivot holes from both edges of chop.

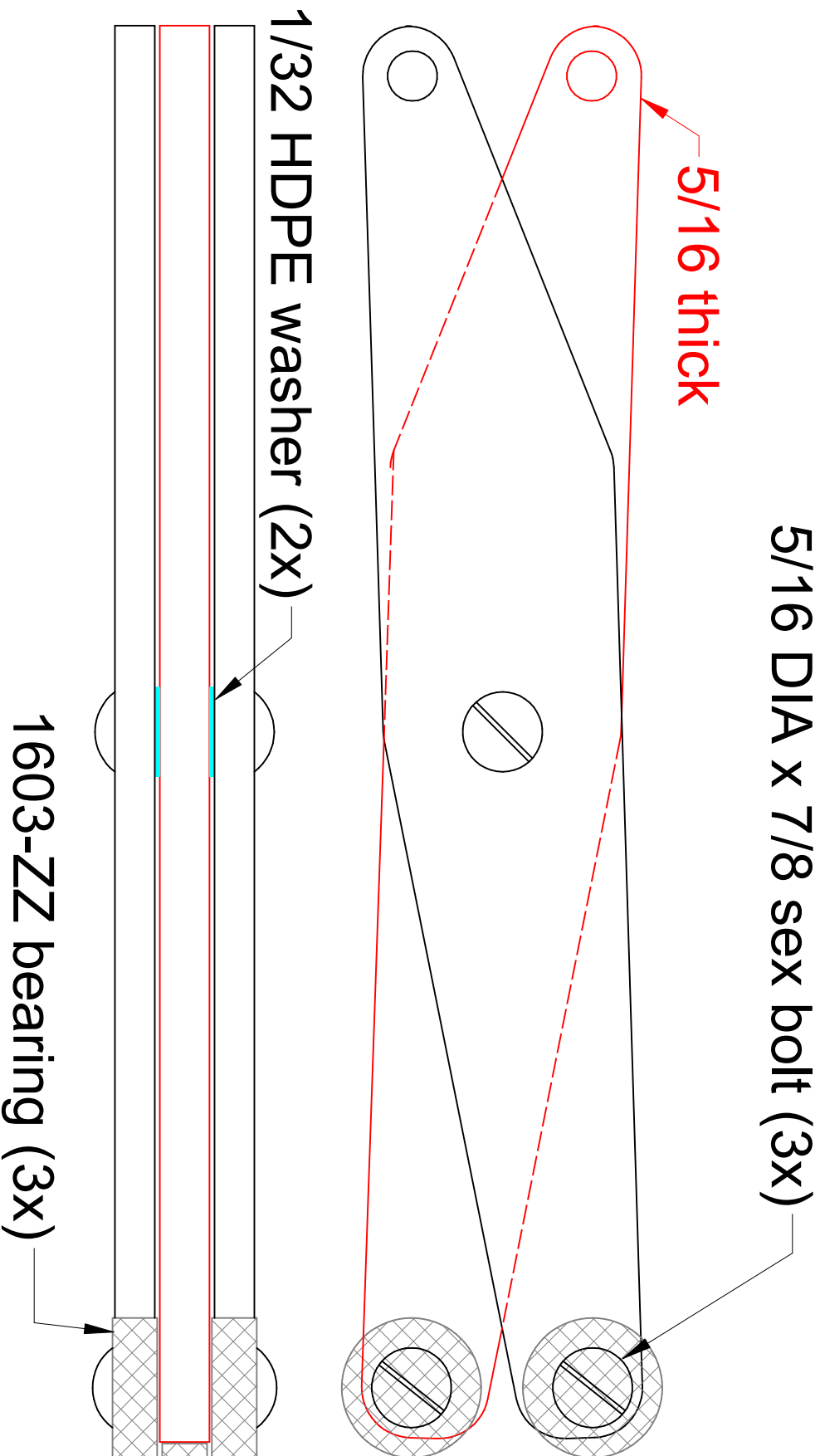
- \_\_\_ Mill groove in chop. The width must clear the sex bolts and the depth must be accurate.
- \_\_\_ Install a bearing plate flush with bottom of groove in both leg and chop.
- \_\_\_ Refer to NCWW-0009 and mill dado in back of leg for bracket. Bracket should be a snug fit in dado.
- \_\_\_ Center block above bracket and fasten with screws through from the bottom of the bracket and from inside the leg.
- \_\_\_ Continue 1-1/4" hole in block through the leg.
- \_\_\_ Assemble X-cross, leg, and chop with 5/16" pivot pins.
- \_\_\_ With a transfer punch or Forstner bit, transfer the center of the 1-1/4" leg hole to the chop inside surface.
- \_\_\_ Disassemble chop and drill blind hole for screw. This hole should be a slightly sloppy fit to avoid binding.
- \_\_\_ Mark location for pivot pin and drill 5/16" hole from both edges of chop.
- \_\_\_ Glue on cork-rubber jaw pads if desired.
- \_\_\_ Assemble vise.
- \_\_\_ Screw handle to front of chop.

The following drawings were squeezed onto a A-size format for your ease of printing.



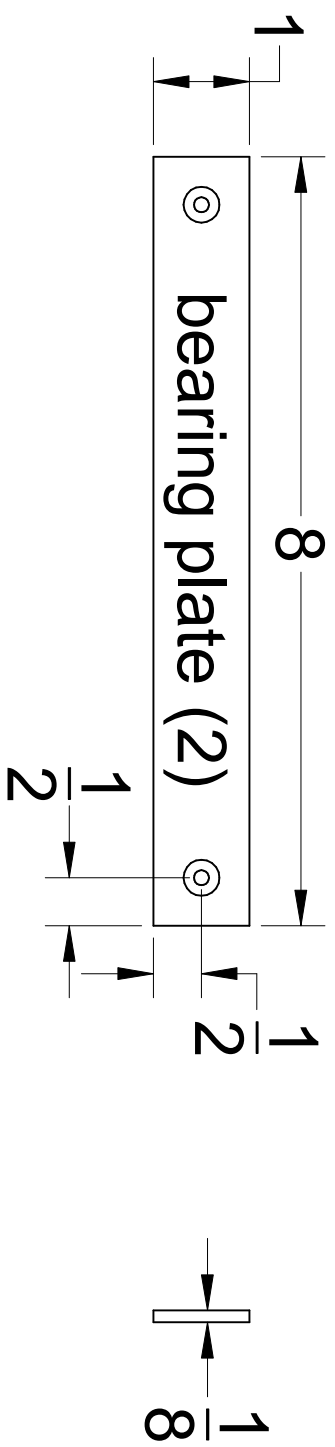
Two 6061-T6 aluminum arms 1/4" thick  
One 6061-T6 aluminum arm 5/16" thick

ncwoodworker.net			
DRAWN	High Vise		
CHECKED	X-cross arms		
ENGINEER	Jul/2021	SIZE	DWG NUMBER
MVP		A	NCWW-0001
APPROVED		REV.	SHEET 1 OF 1
SCALE 1 : 1			

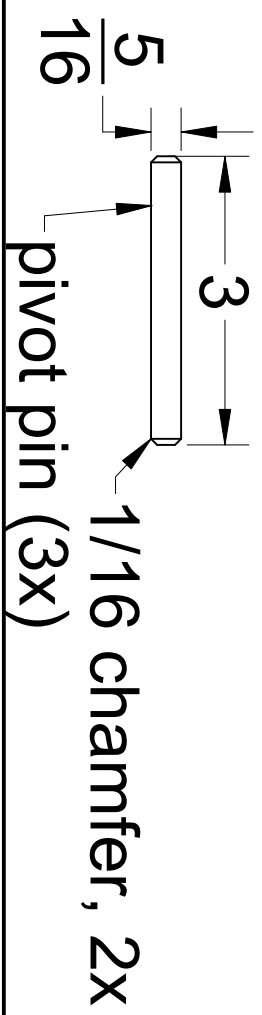
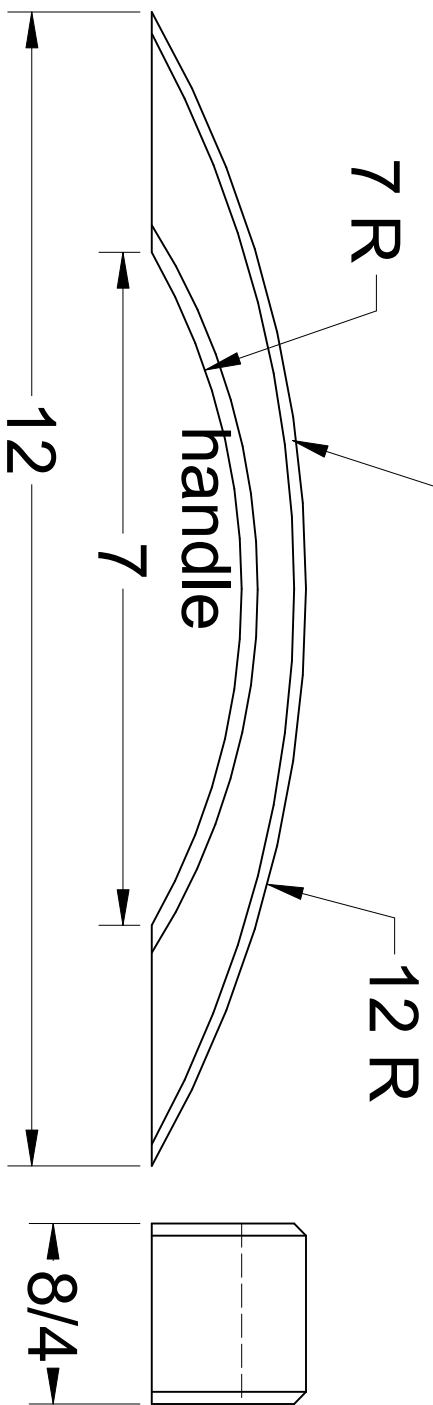


<b>ncwoodworker.net</b>			
DRAWN	High Vise X-cross assembly		
CHECKED			
ENGINEER			
DATE			
APPROVED	Jul/2021	SIZE	DWG NUMBER
		A	NCVWV-0002
SCALE 1 : 1	REV -	SHEET 1 OF 1	





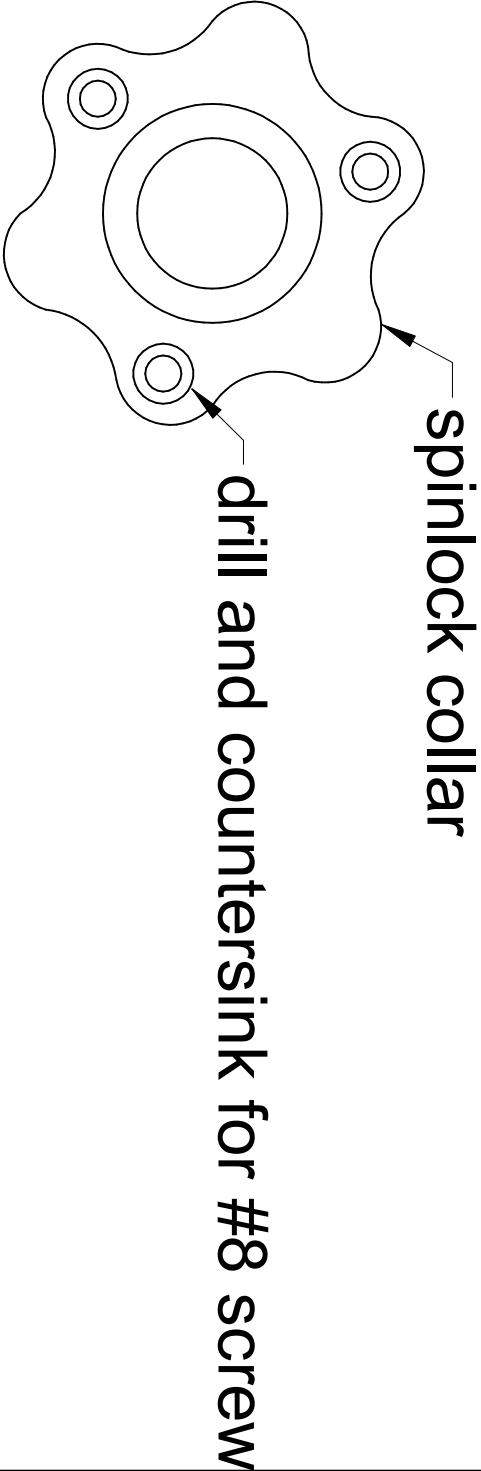
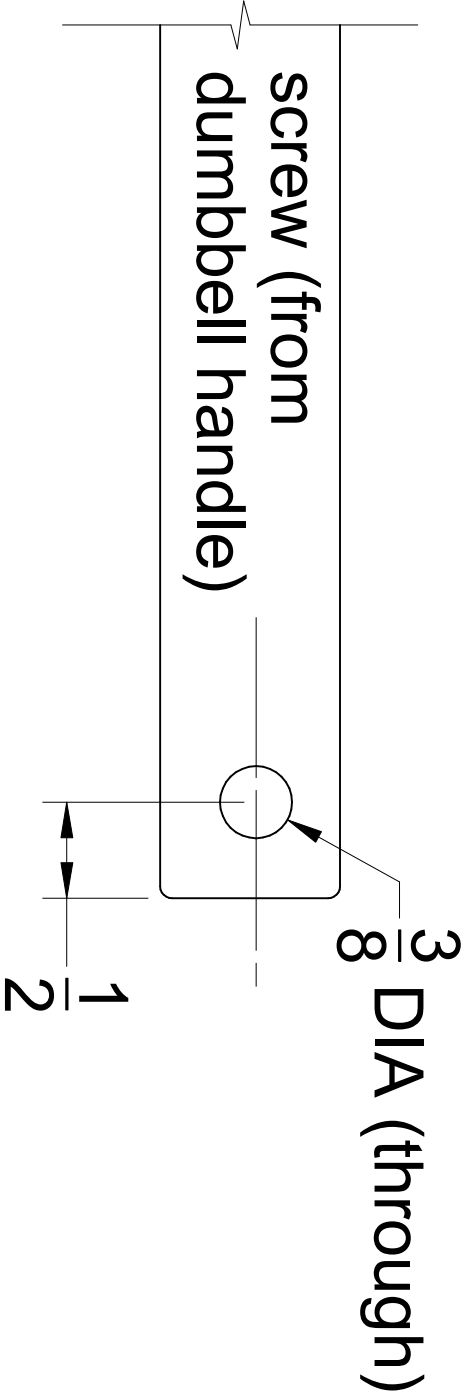
chamfer curved edges



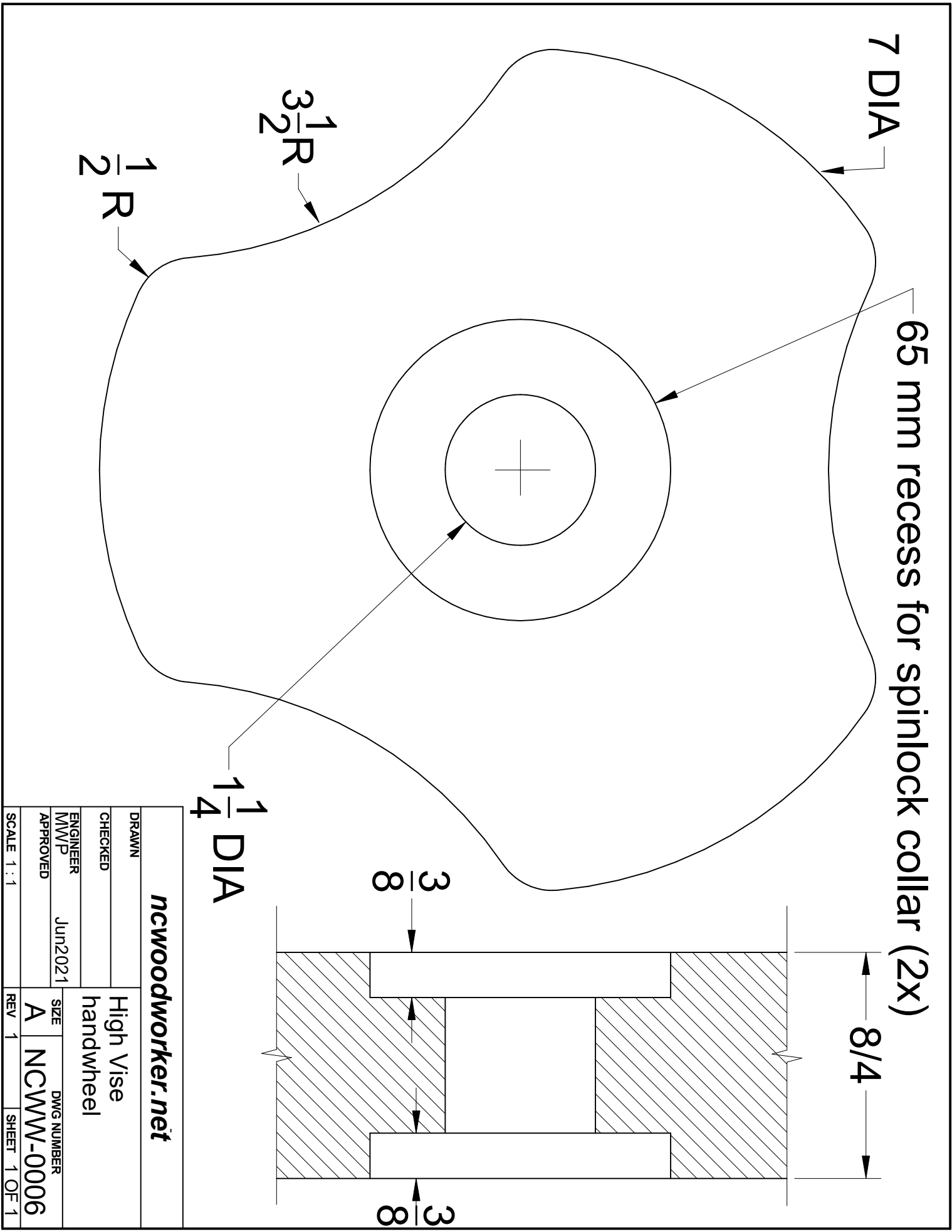
<b>ncwoodworker.net</b>			
DRAWN	High Vise		
CHECKED	handle, pin, and		
ENGINEER	bearing plate		
MW/P	Jun2021	SIZE	DWG NUMBER
APPROVED		A	NCVWV-0004
SCALE 1 : 2	REV 1	SHEET 1 OF 1	

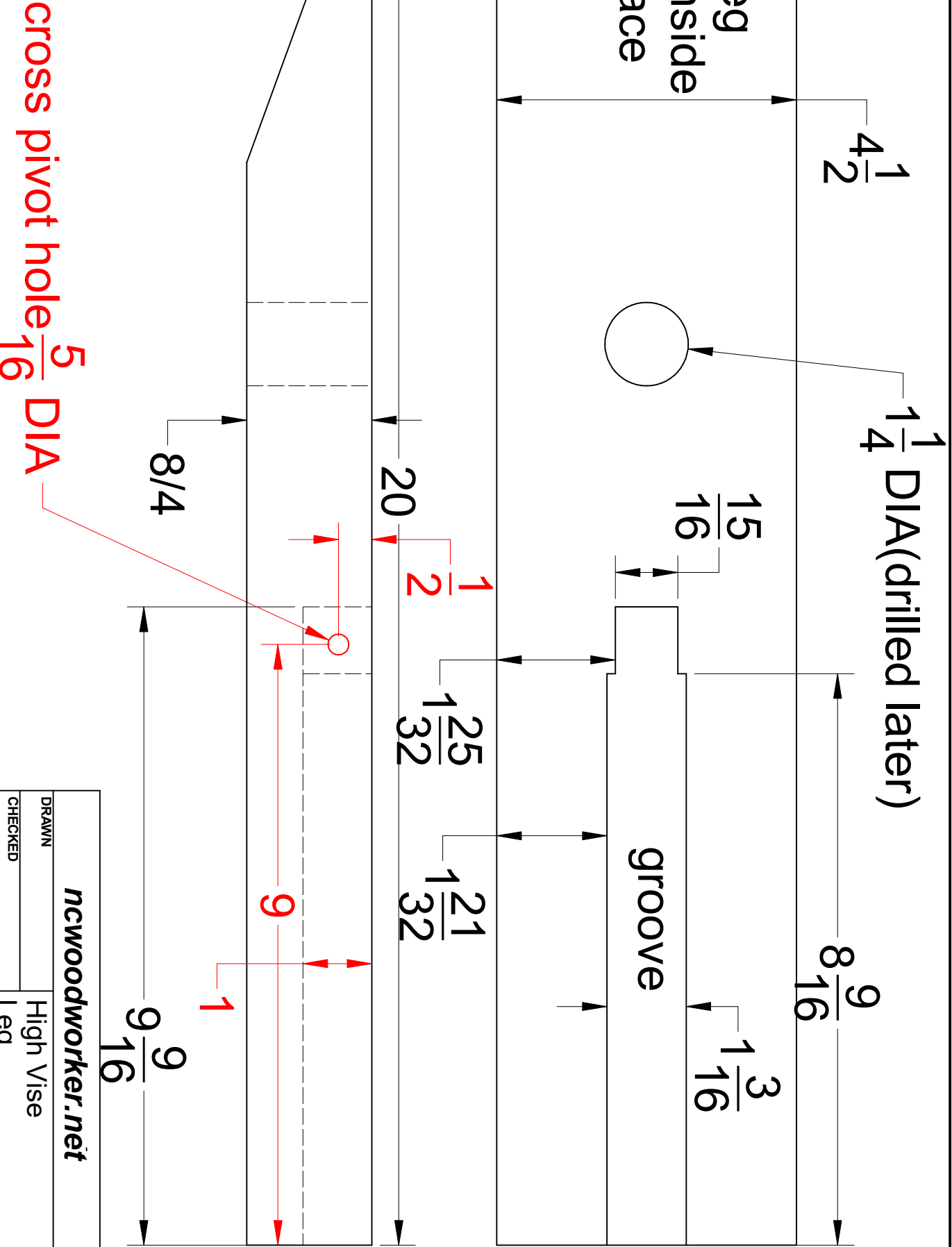


From Walmart, CAP 14" dumbbell handle with spinlock collars  
(#580320499) with rubber grip removed

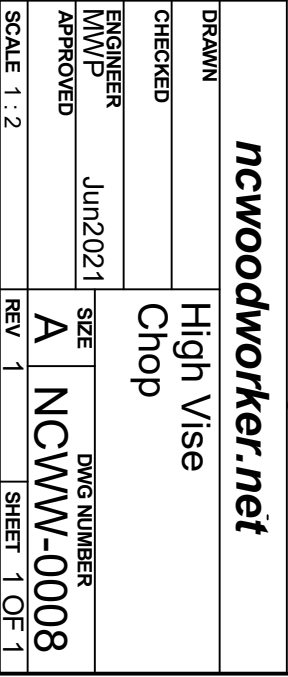


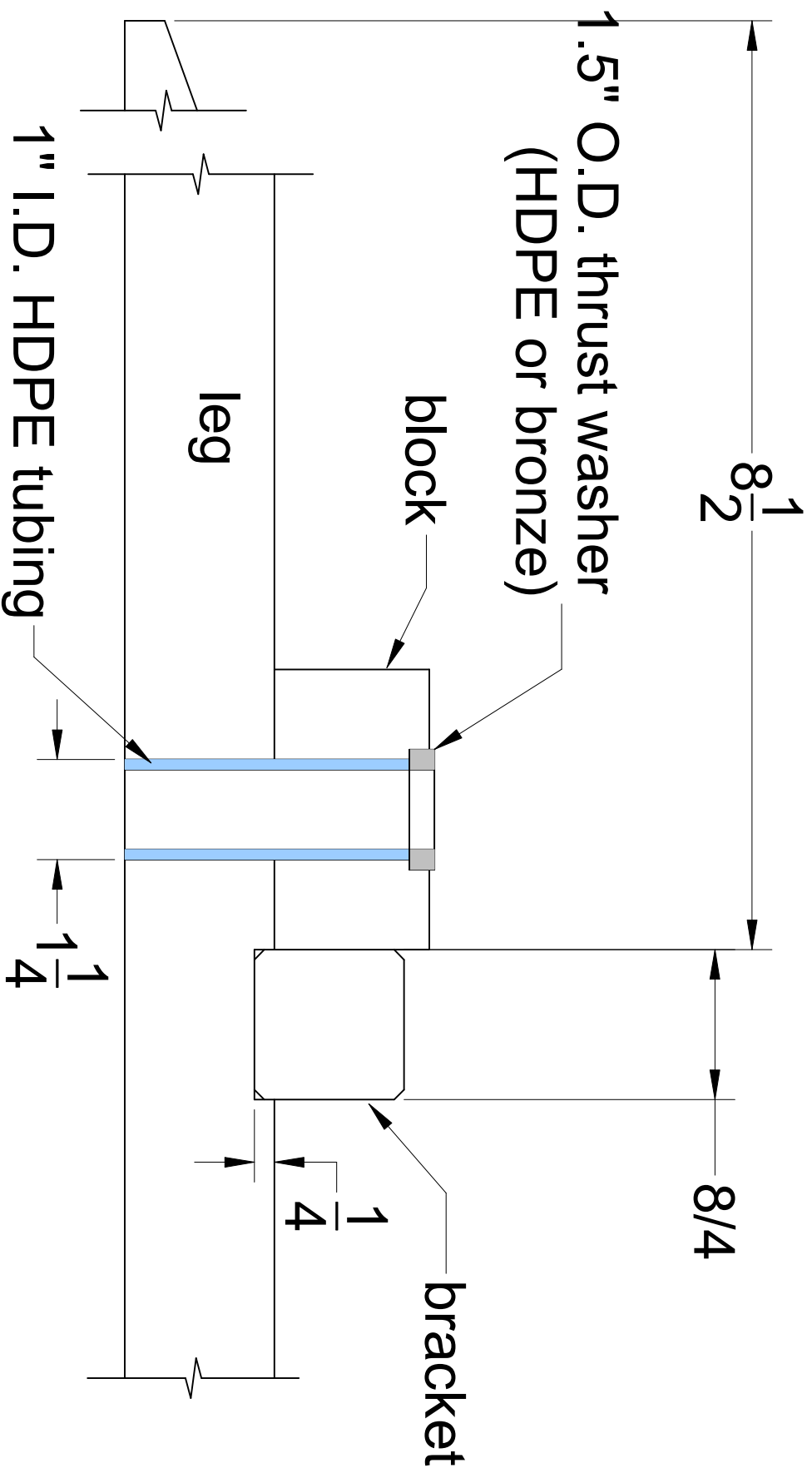
<b><i>ncwoodworker.net</i></b>			
DRAWN	High Vise screw and handwheel collars		
CHECKED			
ENGINEER			
MW/P			
APPROVED			
	Jul/2021		
SCALE 1 : 1	REV -	SIZE A	DWG NUMBER NCVWV-0005
		SHEET 1 OF 1	





ncwoodworker.net			
DRAWN	High Vise		
CHECKED	Leg		
ENGINEER	Jun2021		
MVP	SIZE		
APPROVED	A		
SCALE 1 : 2		DWG NUMBER	
REV -		NCWW-0007	
SHEET 1 OF 1			





<b><i>ncwoodworker.net</i></b>			
DRAWN	High Vise		
CHECKED	leg assembly		
ENGINEER	Jun2021		
MVP	SIZE		
APPROVED	A		
SCALE 2 : 1		DWG NUMBER	
REV -		NCVWV-0009	
		SHEET 1 OF 1	