

JOB NAME Thread Tool Grinding Fixture

BLUE PRINT NUMBER: 01-A-10

INFORMATION: This unique tool is extremely valuable in accurately and speedily grinding threading tool bits.

PRIMARY SKILL LEARNED:

1. Shaping angular work.
2. Milling slots with vise on angle.
3. Mount and dress grinding wheels.
4. Grind surfaces at right angles.
5. Grind thread tool with fixture.

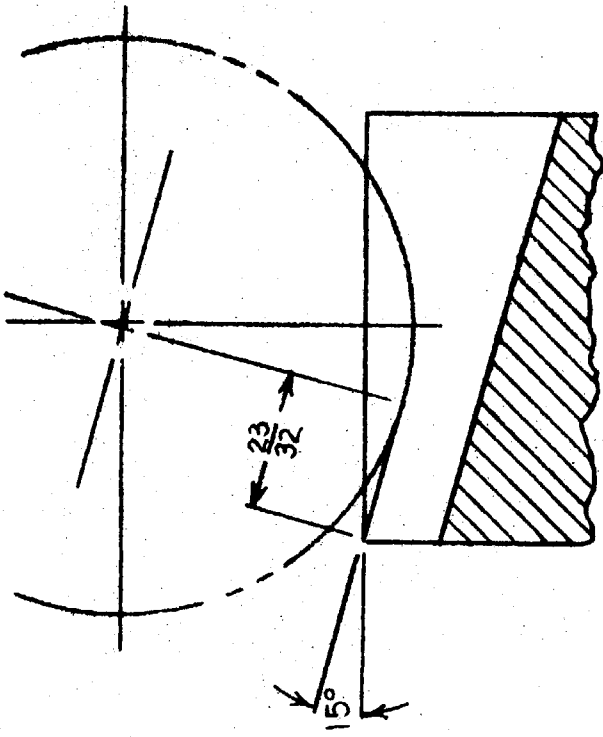
PRECAUTIONS:

1. Drill holes before milling angles.
2. Use sine bar to accurately grind angles.

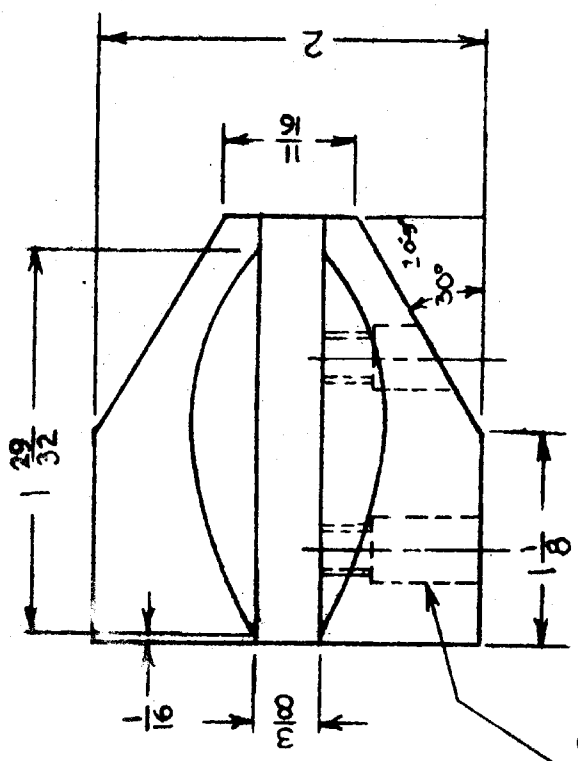
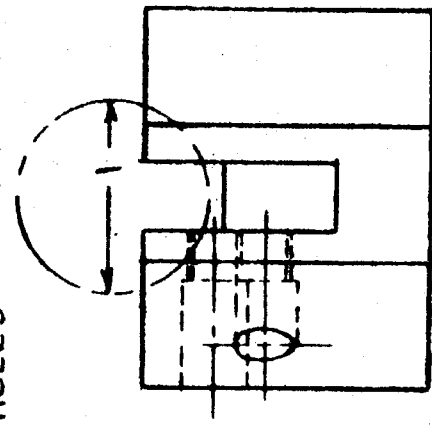
STOCK: 1 5/8" x 2 1/8" Machine steel.

OPERATIONS:

1. Cut off stock to 2 3/8" length.
2. Mill or shape stock to size. (allow .015 on a side for grinding.)
3. Grind piece square.
4. Layout and drill holes.
5. Counterbore holes.
6. Tap holes.
7. Mill or shape 30 degree angles.
8. Mill slot with piece at 15 degree angle.
9. Mill 1" concave finger slot at 15 degree angle.
10. Grind 30 degree angle with sine bar.

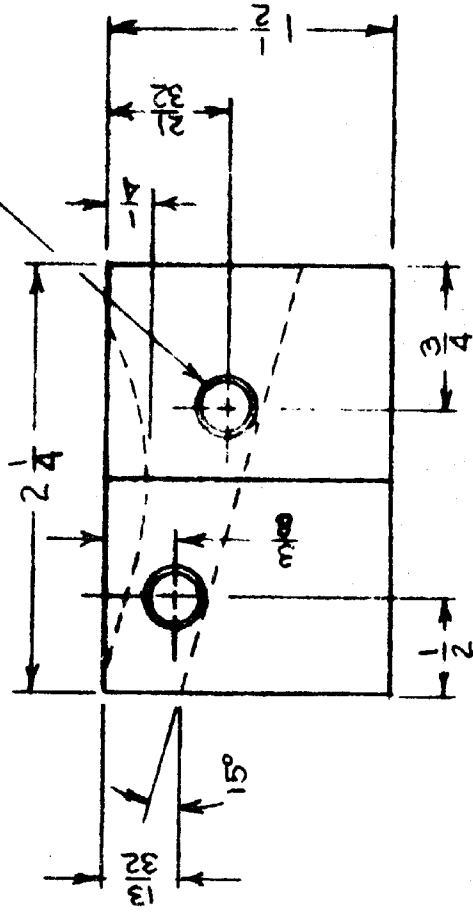


TO COMPLETE USE
TWO SOC. HD SET
SCR $\frac{1}{4}$ -20NC- $\frac{1}{4}$ LG



$\frac{5}{16}$ C. BORE
 $\frac{9}{16}$ DEEP

$\frac{1}{4}$ -20 NC. - 2 HOLES



BREAK ALL UNNECESSARY CORNERS

ELI WHITNEY REGIONAL VOCATIONAL TECHNICAL SCHOOL

DIMENSIONAL TOLERANCES
UNLESS OTHERWISE SPECIFIED:-
Fractional $\pm 1/64$ Decimal $\pm .002$
Angular $\pm 1^\circ$ Concentricity $\pm .001$

Material Machine Steel	PART NAME THREAD TOOL	Date:-	GRINDING FIXTURE
Scales:-			

THREAD TOOL GRINDING FIXTURE

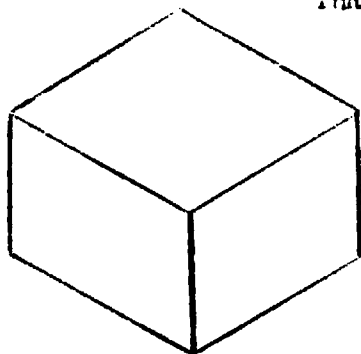


Fig. 1

Shape and grind the block to 1 1/2" X 2" X 2 1/4". All sides must be parallel and square to each other. Fig. 1

Layout for drilling. Drill two # 7 holes 1" deep, counterbore with a 5/16" drill 19/32" deep. Fig. 2

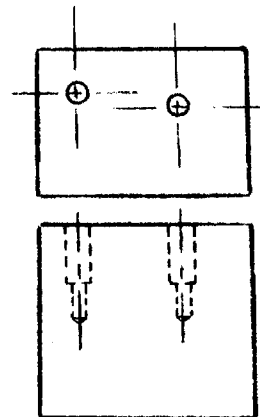


Fig. 2

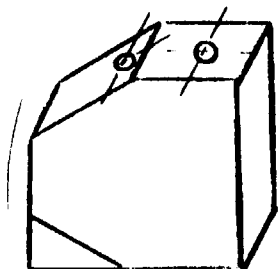


Fig. 3

Mill or Shape 30° angle on both sides, use a Combination Set to locate angle. Fig. 3

Indicate Milling Machine Vise. Mill slot to 3/8" measurement at 15° angle. Using the same set up, mill out the finger slot with a 1" Convex Mill. Fig. 4

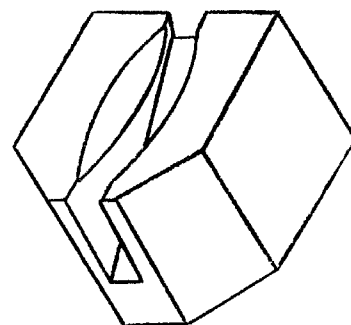
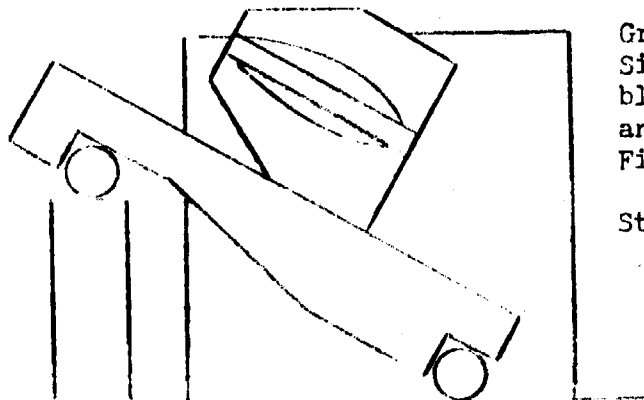


Fig. 4



Grind 30° angle, using a 5" Sine Bar and a 2.500 size block. Secure project to an angle Iron or "U" Iron. Fig. 5

Stamp name and date