

JOB NAME Screw Gage

BLUE PRINT NUMBER: 01-A-4

INFORMATION: This is a valuable tool for checking fine and coarse threads under $\frac{1}{2}$ " in diameter.

PRIMARY SKILL LEARNED:

1. Scribing and center punching.
2. Center drilling in a drill press.
3. Drilling for tapping. (tap size drills)
4. Countersinking.
5. Tapping work held in a vise at right angles to the workpiece.

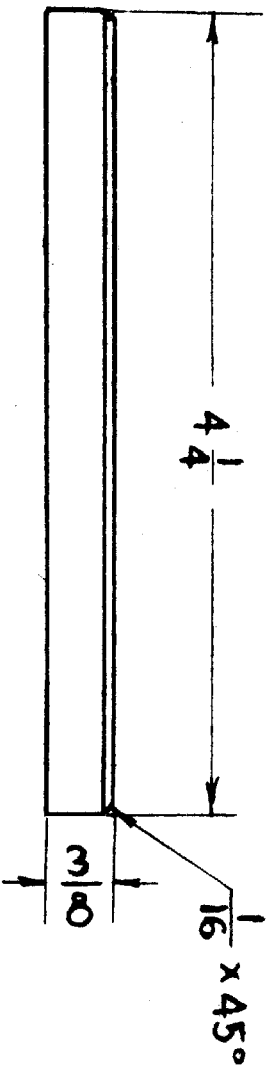
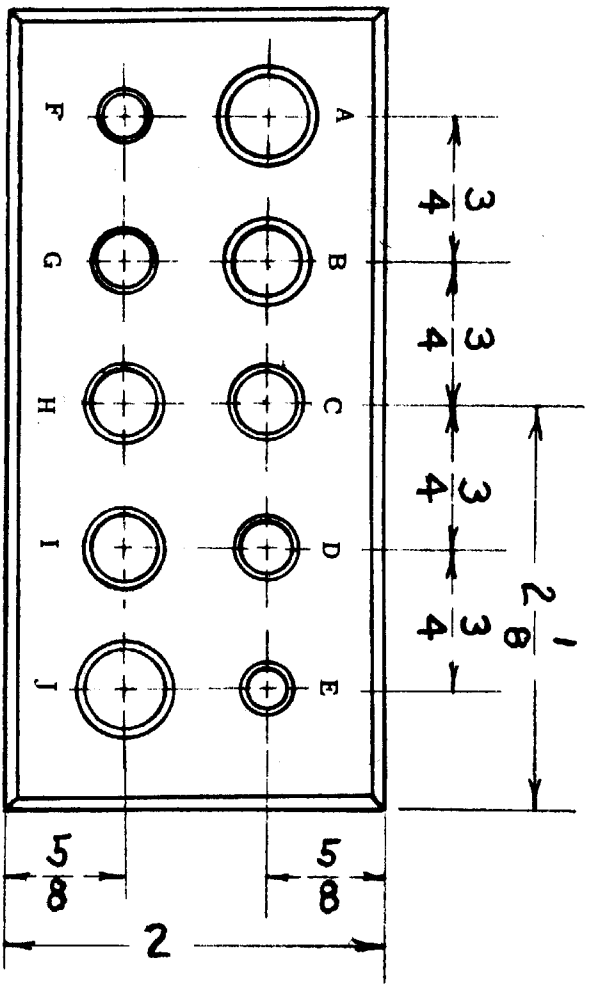
PRECAUTIONS:

1. Layout from center lines.
2. Use thin parallels under work when drilling.
3. Tap largest holes first to get feel of tap wrench.
4. Use small tap wrench for small holes.
5. Use oil when tapping.
6. Check tap from two directions to make sure it is at right angles to the workpiece.

STOCK: $\frac{3}{8}$ " x 2" Cold rolled steel.

OPERATIONS:

1. Cut stock 4 $\frac{3}{8}$ " long.
2. Remove burrs.
3. File outside edges square.
4. File bevel.
5. Apply layout fluid and layout holes.
6. Center drill all holes.
7. Drill all holes.
8. Countersink all holes.
9. Tap all holes.
10. Stamp sizes, name and date.



| HOLE | TAP DRILL | THD Per Inch |
|------|-----------------|--------------------|
| A | $\frac{27}{64}$ | $\frac{1}{2}$ -13 |
| B | U | $\frac{7}{16}$ -14 |
| C | $\frac{5}{16}$ | $\frac{3}{8}$ -16 |
| D | F | $\frac{5}{16}$ -18 |
| E | 7 | $\frac{1}{4}$ -20 |
| F | 3 | $\frac{1}{4}$ -28 |
| G | I | $\frac{5}{16}$ -24 |
| H | Q | $\frac{3}{8}$ -24 |
| I | $\frac{25}{64}$ | $\frac{7}{16}$ -20 |
| J | $\frac{29}{64}$ | $\frac{1}{2}$ -20 |

BREAK ALL UNNECESSARY CORNERS

DO NOT SCALE DRAWING

ELI WHITNEY REG. VOCATIONAL TECH. SCHOOL

MATERIAL
COPPER

PART NAME
SCREEN GAGE

DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED:-
 FRACTIONAL $\pm \frac{1}{64}$ DECIMAL .002
 ANGULAR $\pm 1^\circ$ CONCENTRICITY $\pm .001$

HEAT TREAT

DATE:

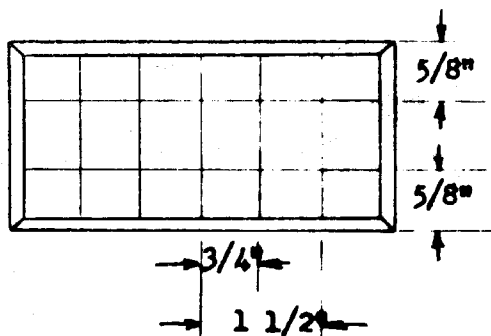
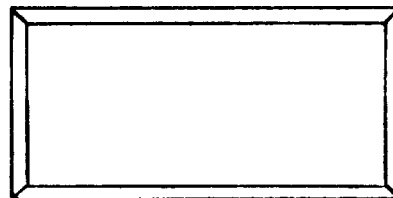
D.W.G. NO.

SCALE:

01-A-4

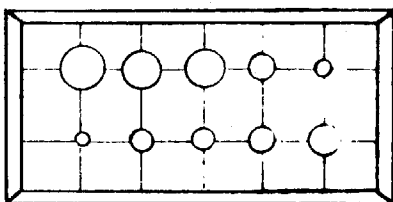
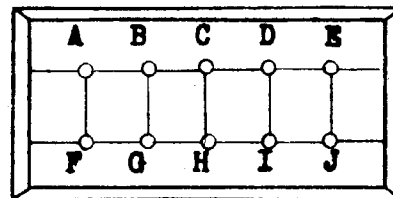
INSTRUCTION SHEET
SCREW GAGE

Select and cut proper material
3/8" X 2" X 3/8". Remove burrs.
File edges square and draw
file bevel 1/16" X 1/16" X 45°.
Paint layout fluid on top.



Use Hermaphrodite Caliper, scribe
5/8" line from sides. Find center
and scribe lines 3/4" to the right
and to the left of center, then
1 1/2" to the right and left of
center line.

Center punch and Center drill
all intersections. Drill all
locations with a #7 drill.
Scribe locations A, B, C, D, E,
F, G, H, I, J.



Drill all locations with the
proper tap size drill, use vise
when drilling. Note chart on print
for tap size drill.

Countersink both sides of all
holes 1/16" deep with a 90°
Countersink. Tap holes with
the proper tap. Use oil-
STAMP tap sizes at locations.
Stamp name and date. Finish.

