

JOB NAME 1-2-3-Blocks

BLUE PRINT NUMBER: 01-A-15

INFORMATION: These blocks are precision tools and are extremely useful for laying out and checking work. They can also be used as parallels.

PRIMARY SKILL LEARNED:

1. Shape square and to decimals.
2. Layout from drawing.

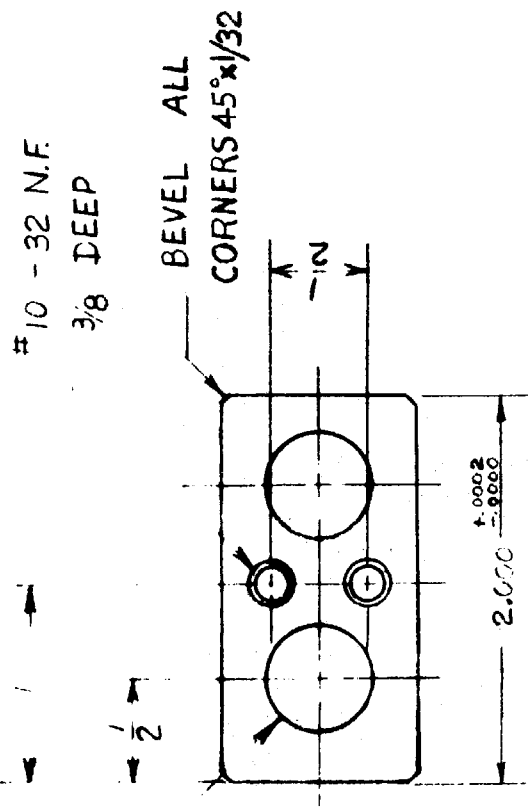
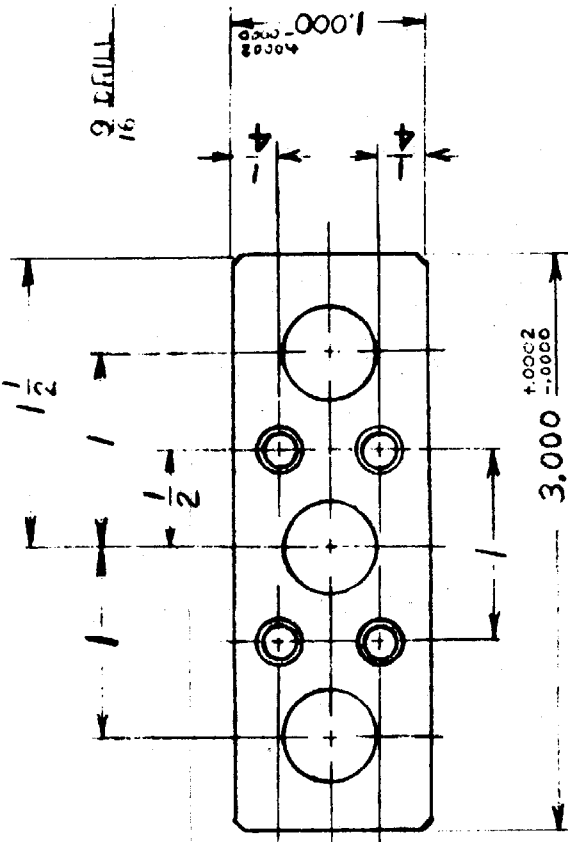
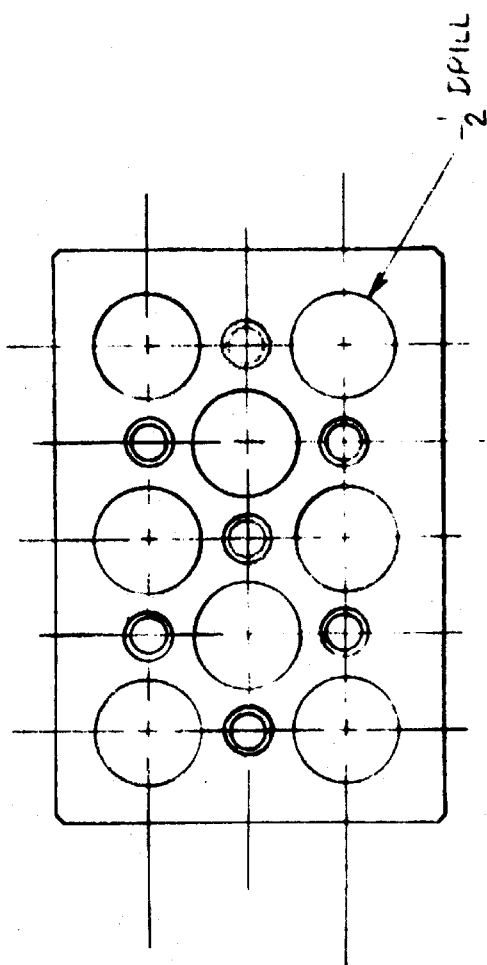
PRECAUTIONS:

1. Allow $1/32$ " overall for grinding before and after hardening.
2. Drill long holes first.
3. Use proper size tap wrench when tapping.
4. Observe safety rules when drilling.

STOCK: 1- $1/8$ " X 2- $1/8$ " Machine steel.

OPERATIONS:

1. Cut stock to length 3- $1/8$ ".
2. Shape stock to dimensions plus $1/32$ ".
3. Grind square. (Allow .015 for grinding after hardening.)
4. Layout holes.
5. Drill holes.
6. Tap holes.
7. Harden and grind.



BREAK ALL UNNECESSARY CORNERS

DO NOT SCALE THIS DRAWING

ELI WHITNEY REGIONAL VOCATIONAL TECHNICAL SCHOOL

Material: 1018 S Steel
Heat Treat: _____
PART NAME: 1-2-3 Blocks

DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED
Fractional ±1/64
Decimal ±0.002
Concentricity ±0.001

Date: _____
Scale: _____

DWG. NO. 15

1 2 3 BLOCKS

Two pieces of $1\frac{1}{8}$ " X $2\frac{1}{8}$ " machine steel, $3\frac{1}{8}$ " long. Shape parallel and square to $1\frac{1}{32}$ " X $2\frac{1}{32}$ " X $3\frac{1}{32}$ ".
Remove burrs. Fig. 1
Grind square to 1.015 " X 2.015 " X 3.015 ".

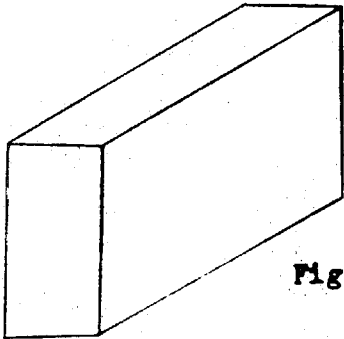


Fig. 1

Layout hole locations from the center line. Center drill all intersections. The following is a list of holes to be drilled in each block.

2	holes	$\frac{9}{16}$ "	diameter	3"	deep
3	"	$\frac{1}{2}$ "	"	2"	"
8	"	$\frac{1}{2}$ "	"	1"	"
26	"	#21 drill		$\frac{3}{8}$ "	"

Drill two holes $\frac{9}{16}$ " diameter thru the three inch side. Remove the burrs. Using a 90° countersink, countersink the holes on both sides $\frac{1}{16}$ " deep.

Fig. 2

Drill three holes $\frac{1}{2}$ " diameter thru the two inch side. Remove the burrs. Countersink $\frac{1}{16}$ " deep as above.

Fig. 3

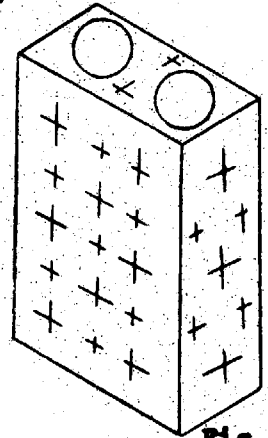


Fig. 2

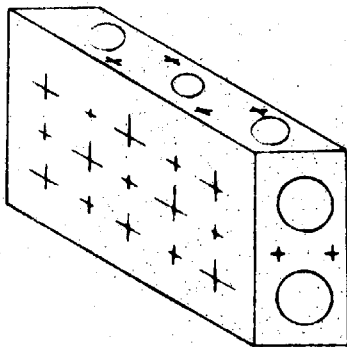


Fig. 3

Drill eight holes $\frac{1}{2}$ " diameter thru the one inch side. Remove the burrs after each hole is drilled. Countersink $\frac{1}{16}$ " deep as above.

Fig. 4

Drill twenty-six #21 drill holes $\frac{3}{8}$ " deep. Use a $\frac{3}{16}$ " drill and counterbore these holes $\frac{1}{16}$ " deep. Tap all twenty-six holes with a $\frac{10}{32}$ tap $\frac{5}{16}$ " deep. Stamp and date. Fig. 5

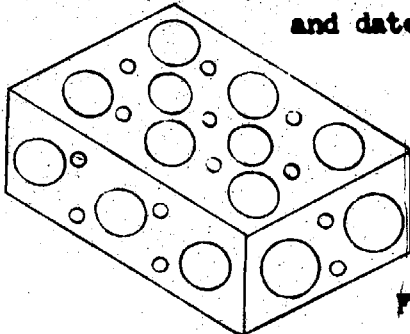


Fig. 5

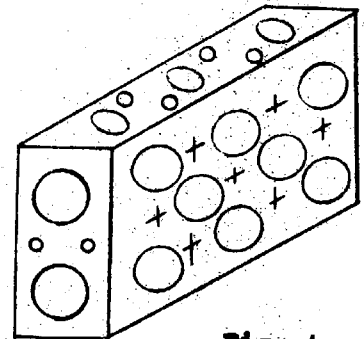


Fig. 4

Pack harden grind and lap.