MEAM 150

Fundamentals of Mechanical Prototyping

STIRLING FUNDAMENTALS

WORKHOLDING

STIRLING ENGINE FUNDAMENTALS

Dr. Robert Stirling

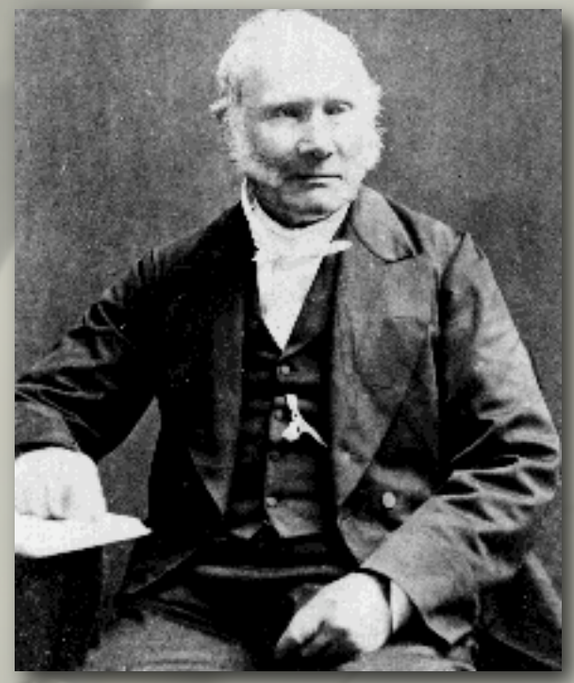
patent 1816

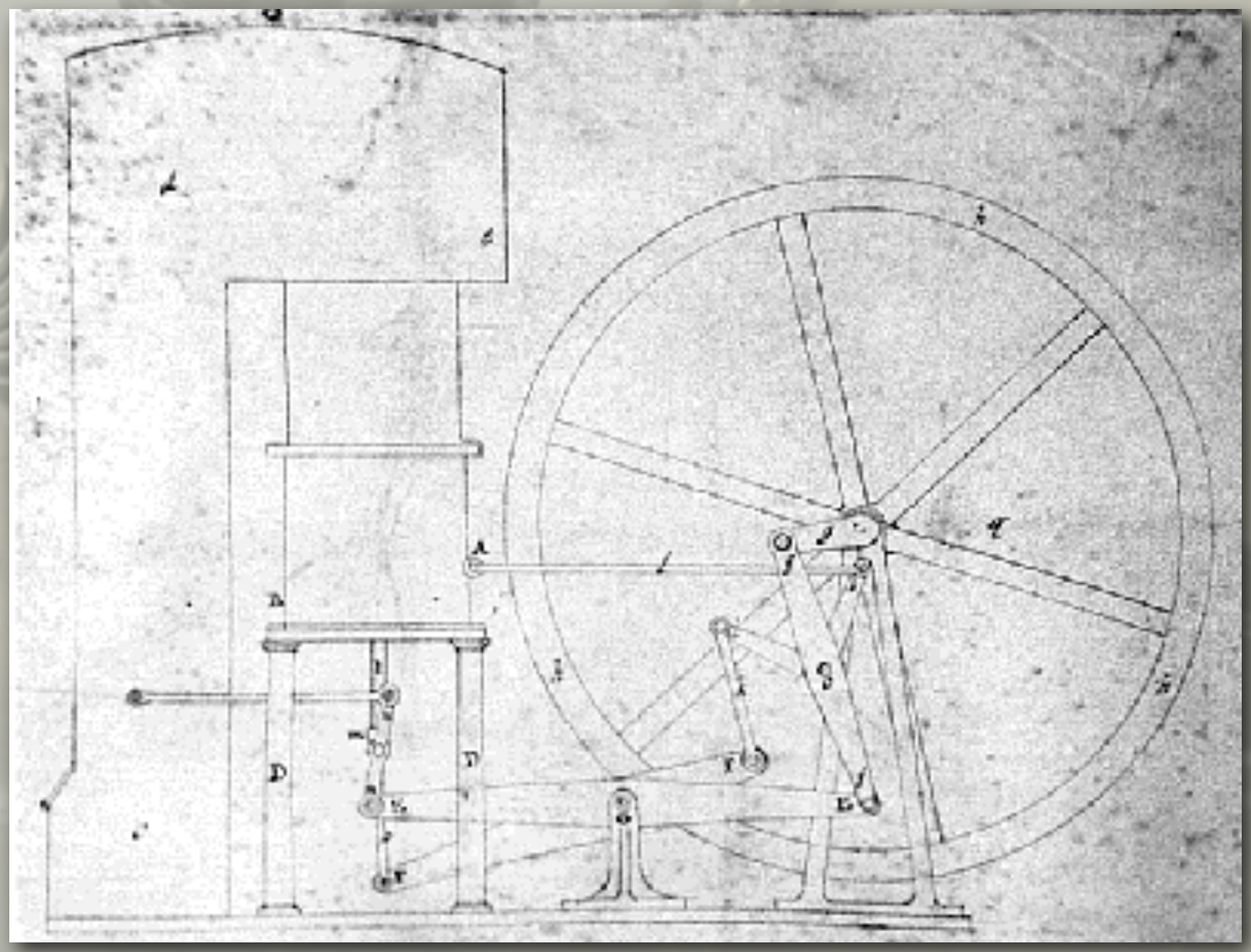
closed-cycle regenerative hot air engine

theoretical full Carnot efficiency

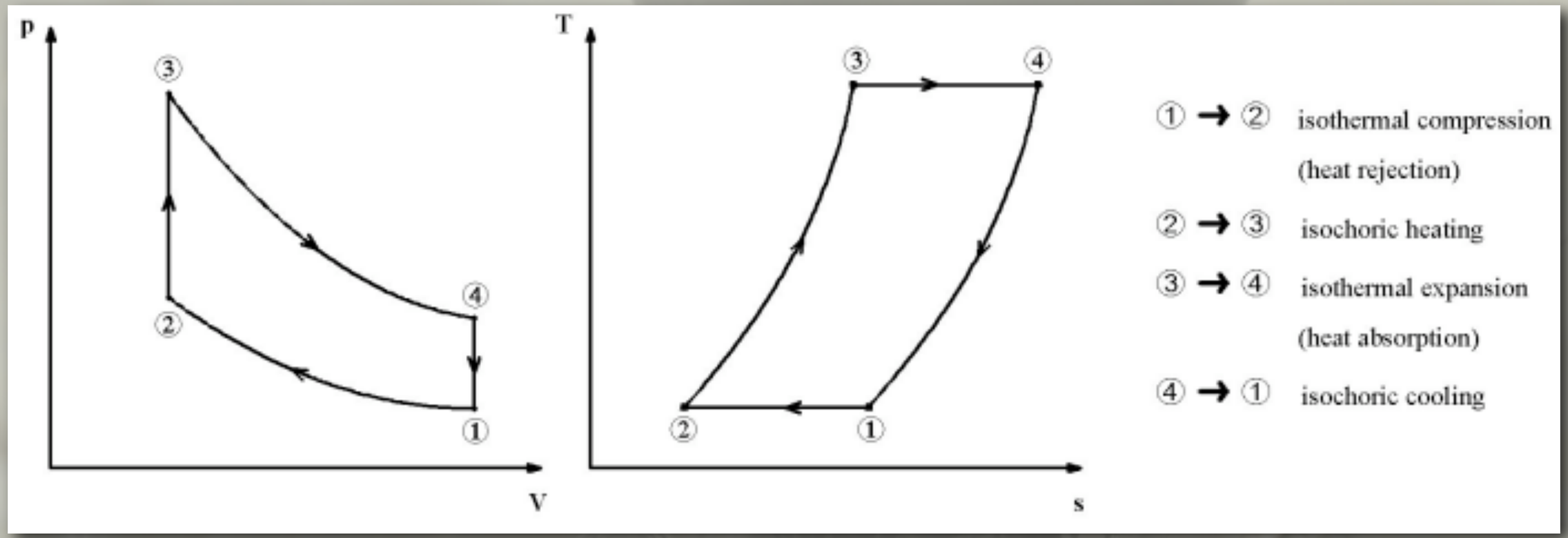
any heat source

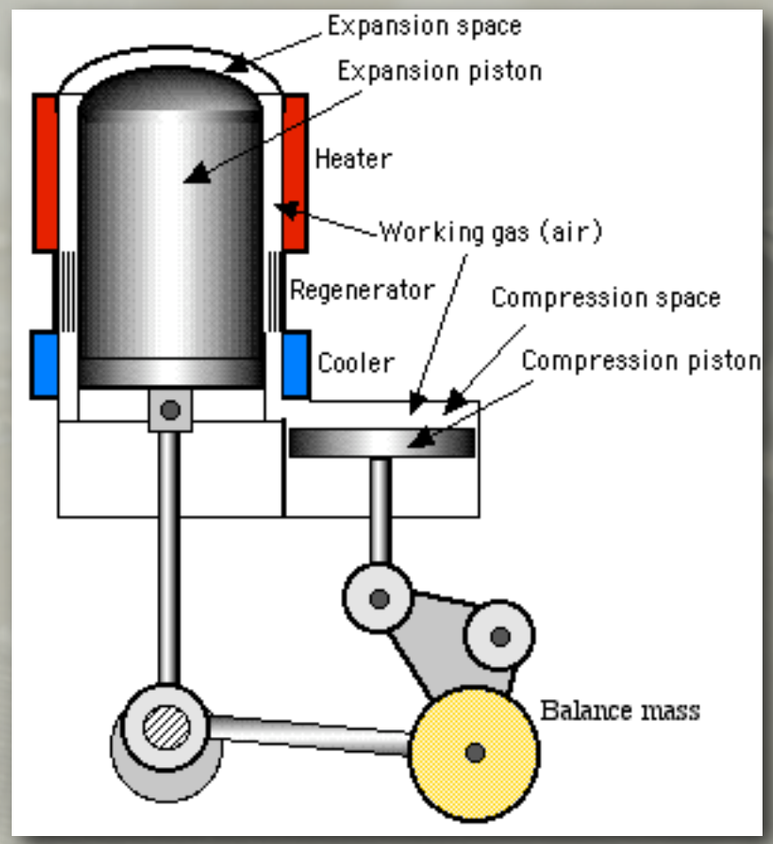
semi-reversible

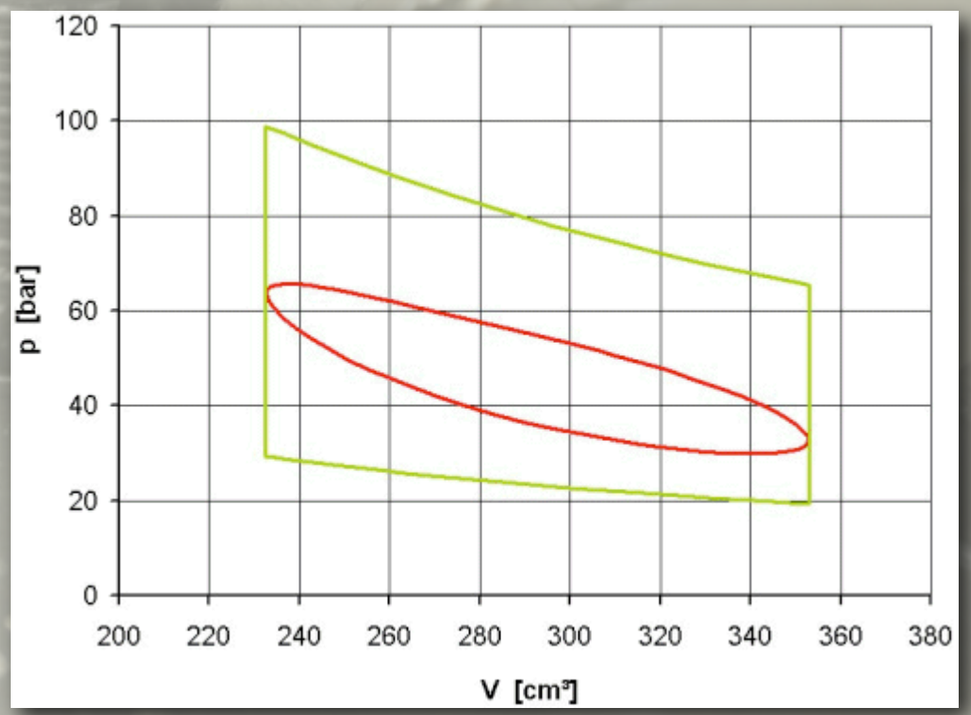




THERMODYNAMICS OF THE STIRLING ENGINE







THE JOY OF FIXTURES

GENERAL GUIDELINES

KEEP YOUR PART FROM MOVING

VISE

SCREWS

BOLTS

CLAMPS

ETC.

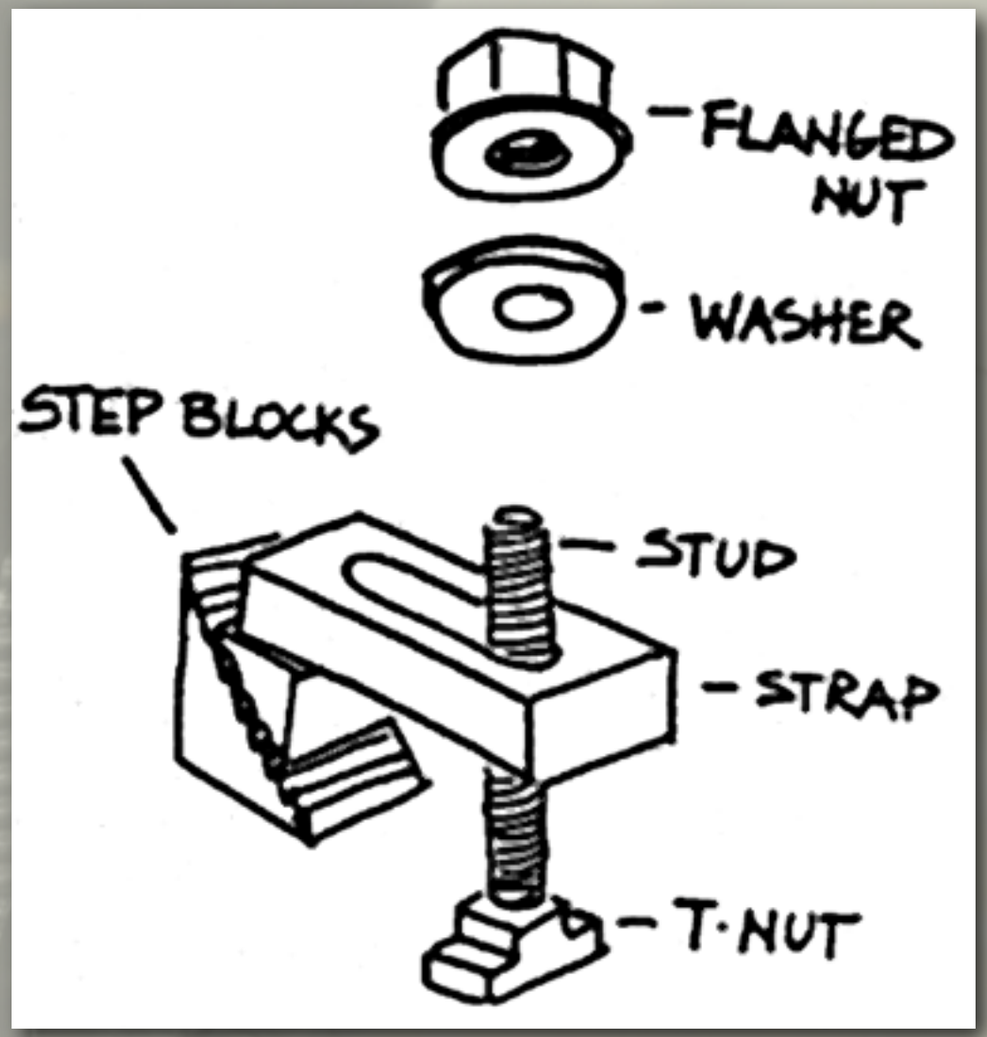
LOCATE YOUR PART/BLANK

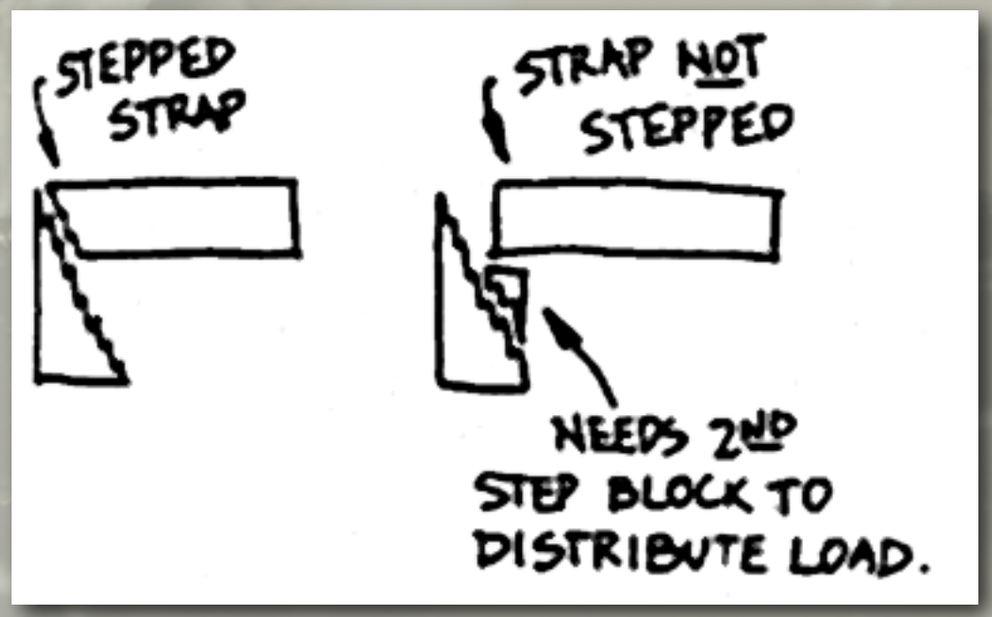
PINS

SHOULDER SCREWS

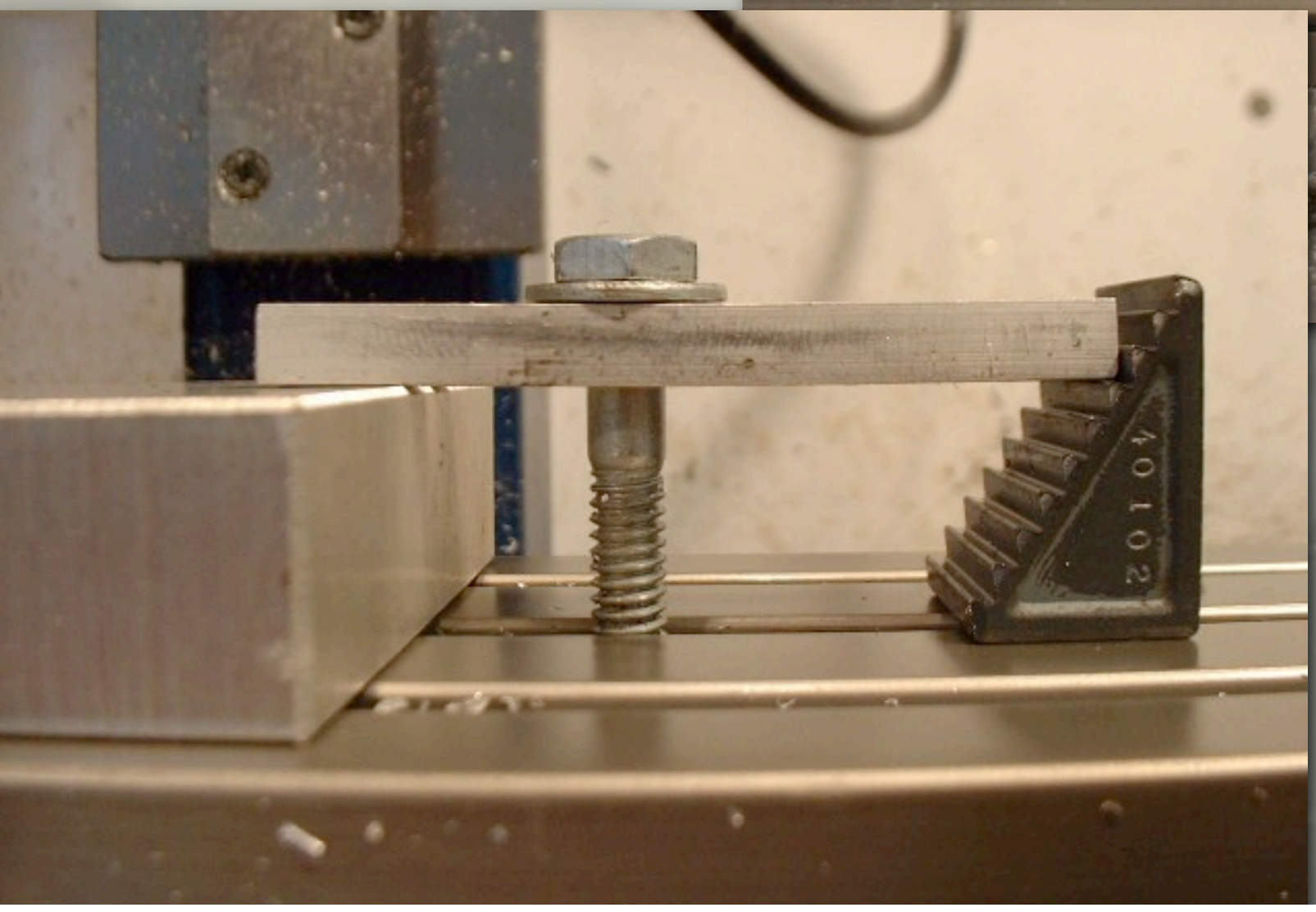
ETC.

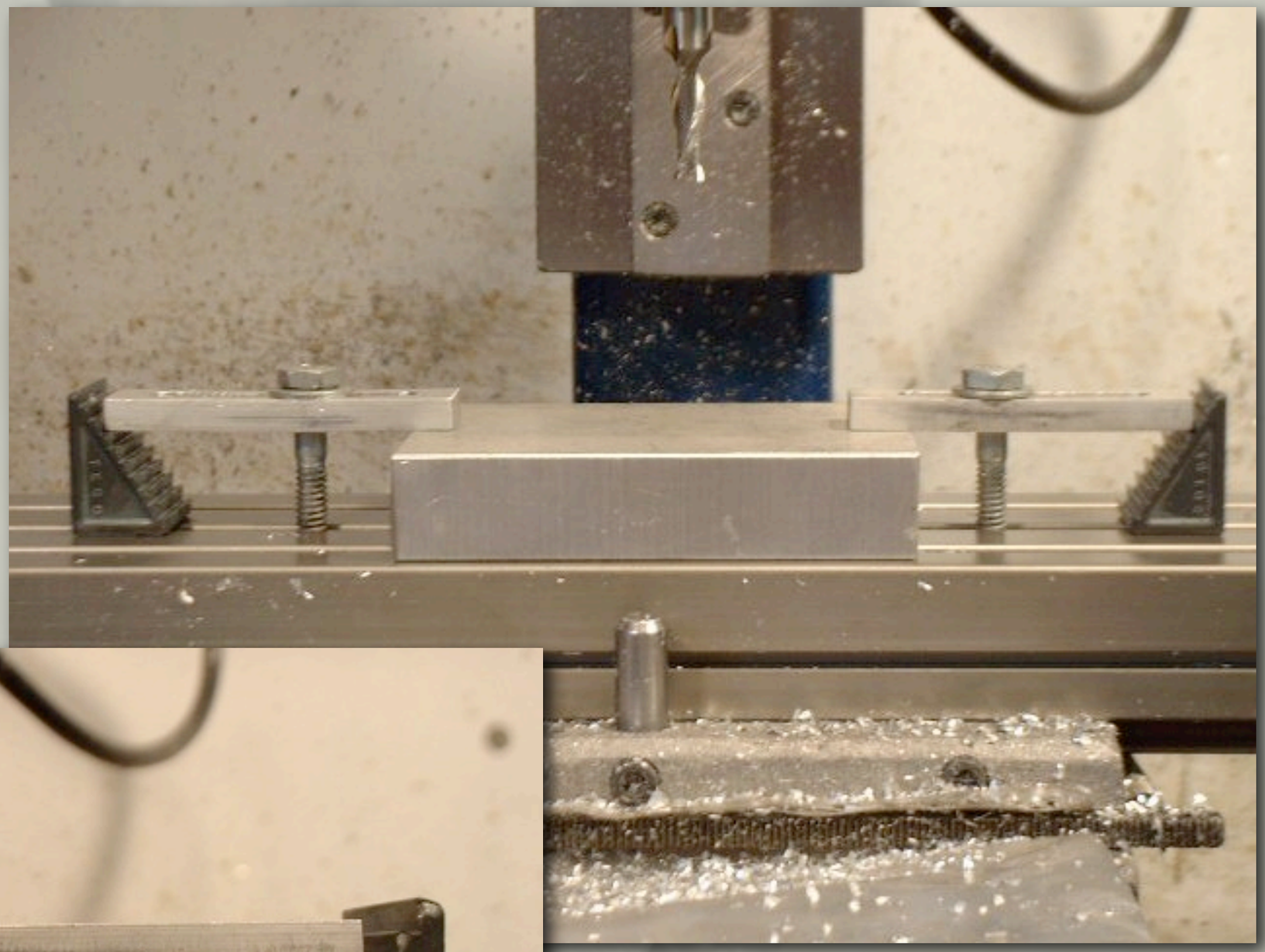
STRAP CLAMPS





CUSTOM STRAP CLAMPS

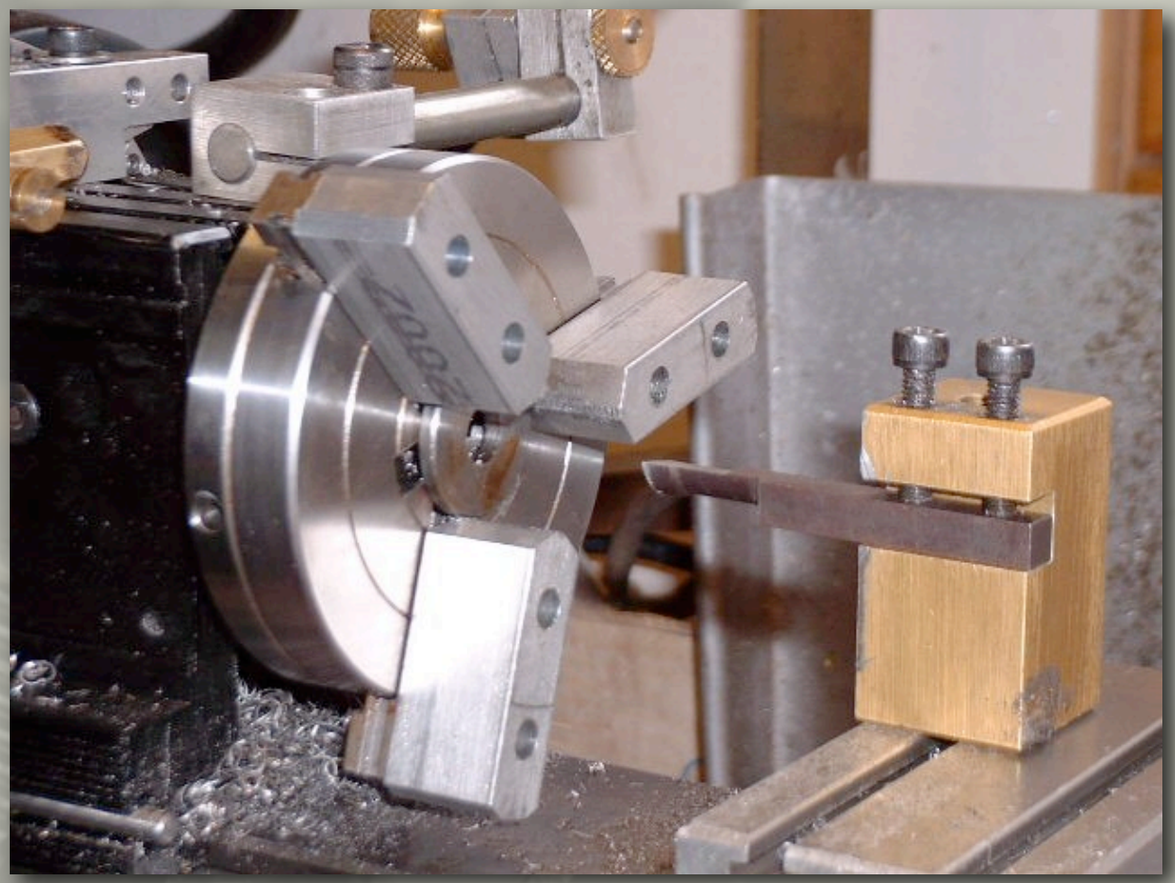


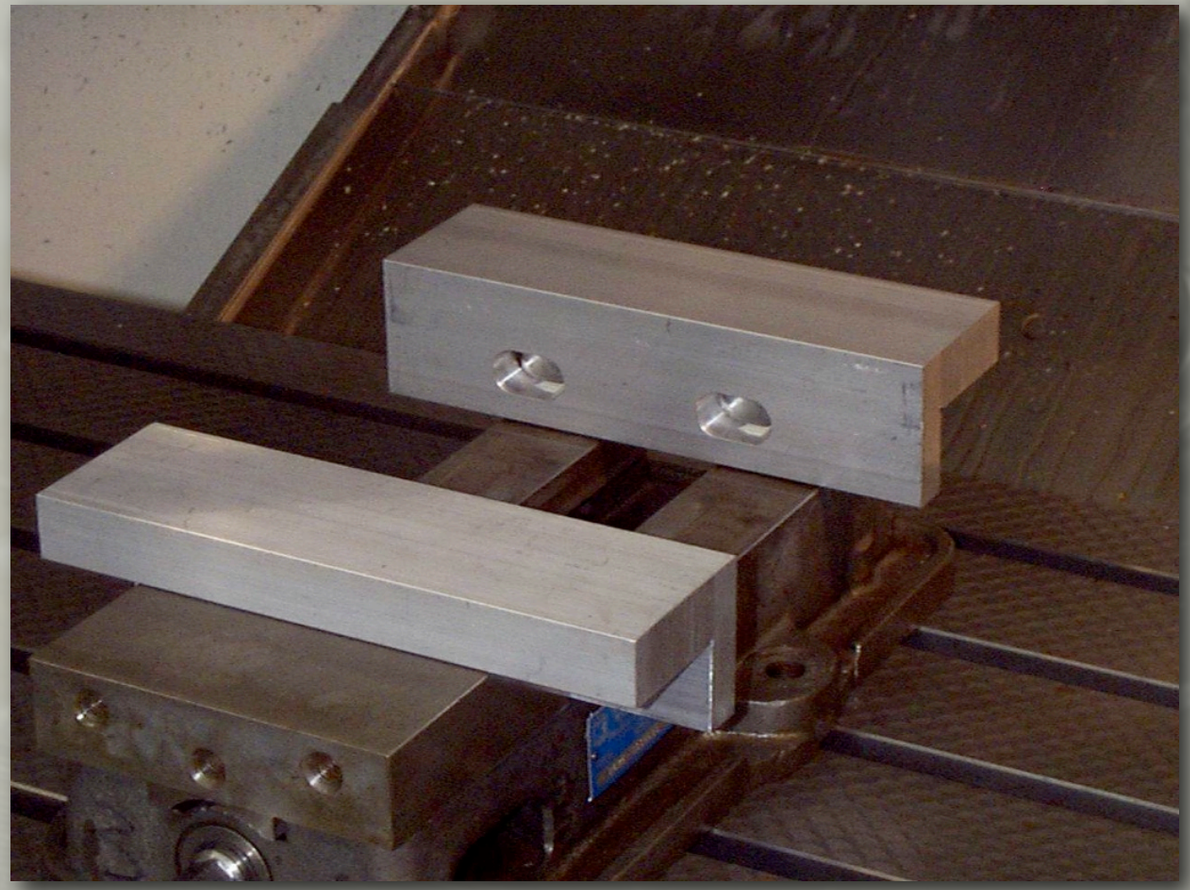


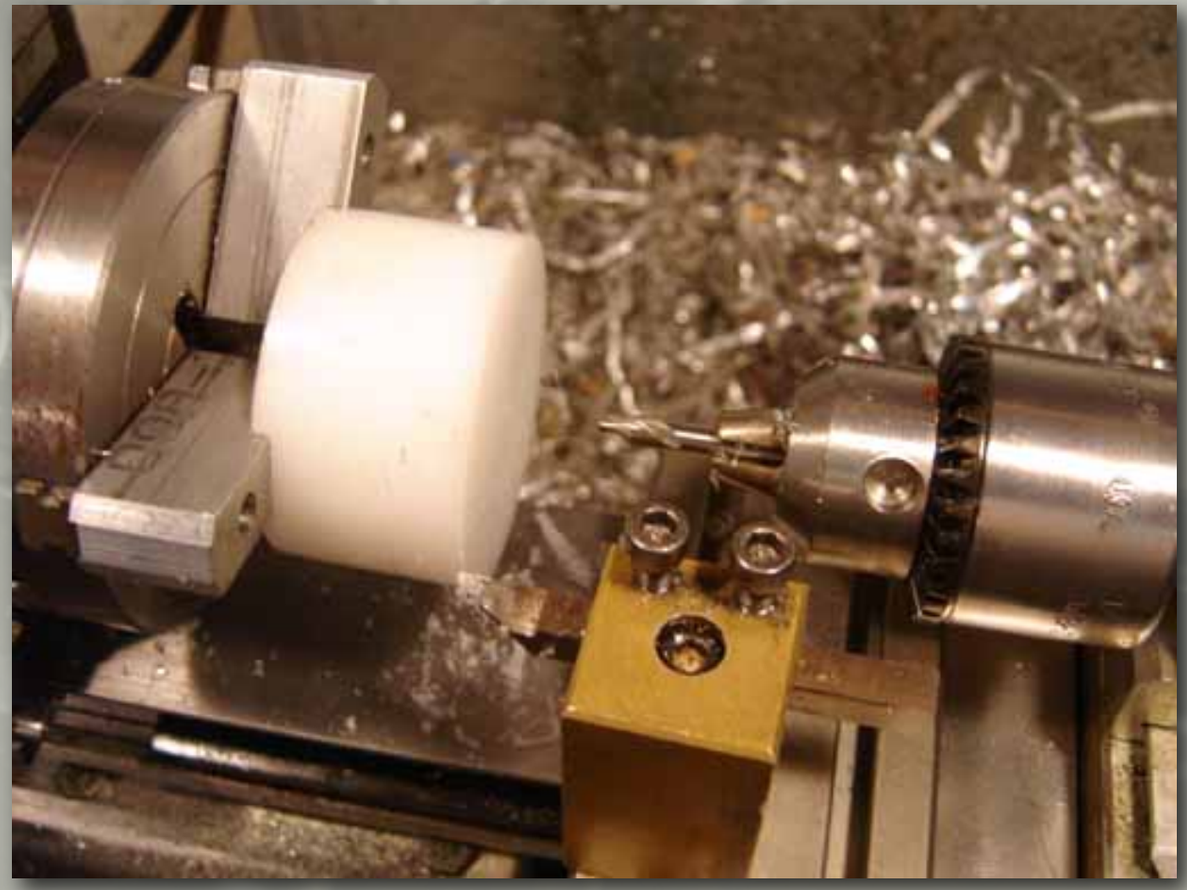
CUSTOM FIXTURES

SOFT JAWS

ODD SIZES/SHAPES
MACHINABLE







CUSTOM FIXTURE ELEMENTS

MATERIAL: STEEL VS. ALUMINUM

LOCATING ELEMENTS: ARE SCREWS GOOD ENOUGH?

MACHINE SCREWS

DOWEL PINS

SHOULDER BOLTS