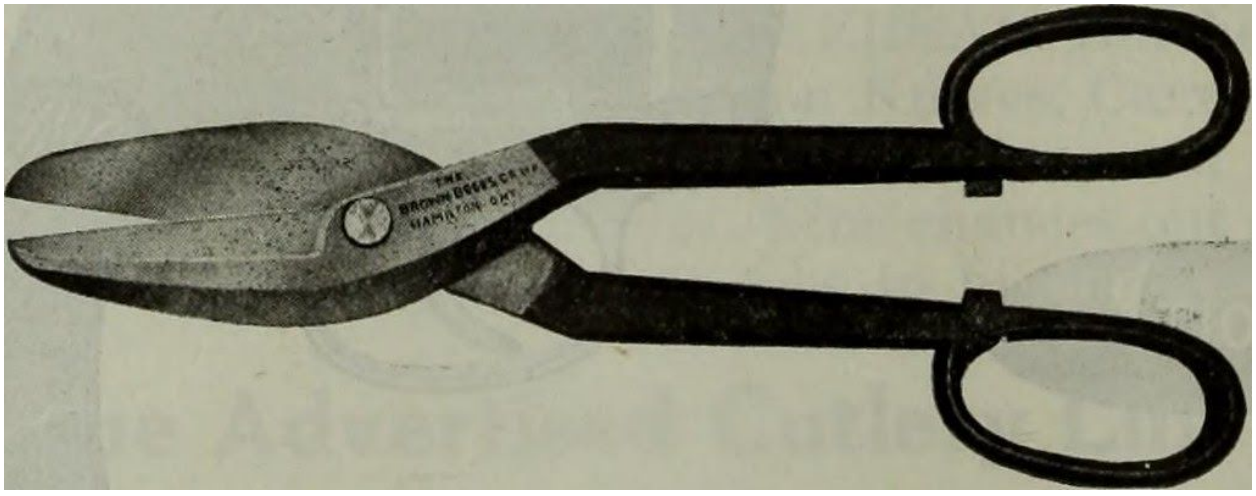
Mechanical Cutting of Metal and Steel

- The choices of available methods to cut metal decreases as the thickness and size of the work piece increases
- A simple hacksaw can be used to cut tubing, solid rod or bar stock, but thicker walled metals will require powered cutting equipment

- Thin-gauge sheet metal can be cut with hand **sheetmetal snips** (sufficient for cutting curves in sheet metal thinner than 18 gauge)



- Plate steel requires mechanical or hydraulic powered **shears** (thicknesses less than 16 gauge for the mechanical version while the hydraulic shears can cut 3/16 inch and even thicker for some versions)
- When cutting with a blade, use **bi-metal** saw blades (hacksaw or bandsaw) and avoid using excessive downward force but simply let the blade cut while applying slow, steady pressure. This ensures a longer lasting blade by reducing wear


CRAFTSMAN
10 Amp

- A horizontal metal cutting bandsaw is bench mounted with clamps holding the work piece. When the cut is finished, the saw shuts off automatically
  -the most common cutting capacity is 4x6 inches, which means it can cut a rectangular piece that size
- Portable metal cutting bandsaws can usually cut up to 4 inch stock

- A big advantage bandsaws have is the very small **kerf** (the metal removed by cutting), usually less than ⅛ inch

- Metal cutting **chopsaws** and **angle grinders** use abrasive wheels for cutting

  - these leave burred edges and produce a lot of heat, dust and sparks
  -chop saws with **carbide** tipped blades produce cleaner cuts with less heat and are faster
  -both types produce a larger kerf than the bandsaw, 5/32 inch and greater
  -they operate like a circular saw or chop saw used to cut wood, but can cut ¼ inch steel and all types of

tubing and solid bar