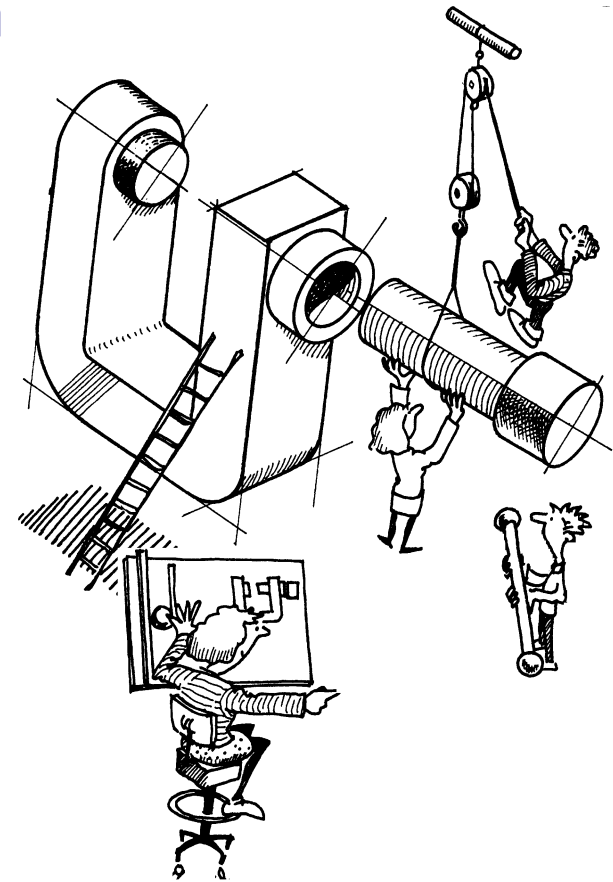


# Aligning Parts in an Assembly



This week you will learn how to align parts in an assembly. The steps to follow are:

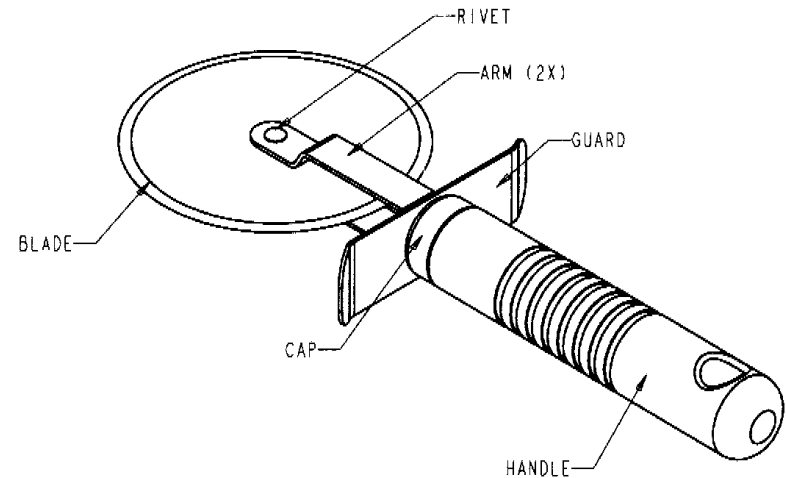
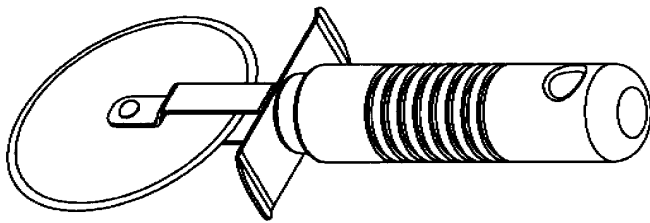
- Introduction to Assembly
- Assembly Drawing
- Exploded Assemblies
- Bill of Materials (or Part List)



# Aligning Parts in an Assembly

## Introduction to Assembly

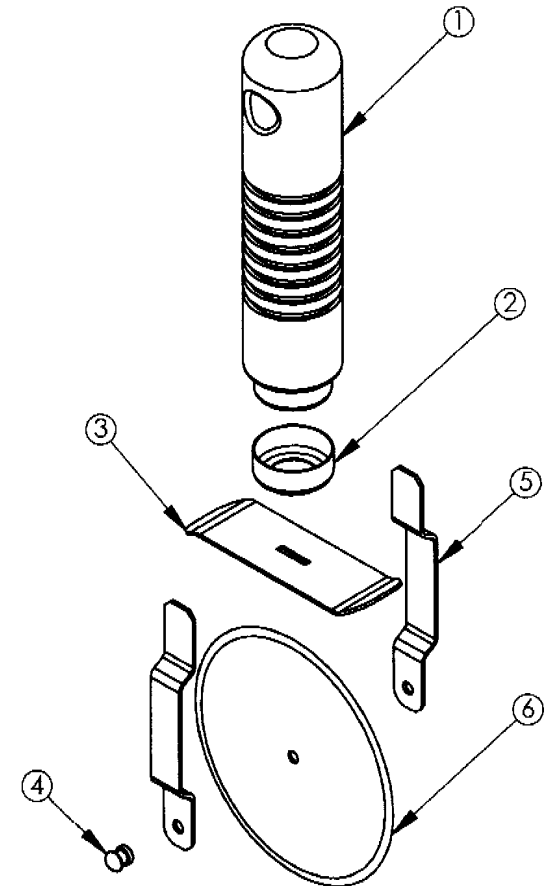
*Assembly drawings* show how the components of a design fit together dimensions and other details are usually omitted in assembly drawings to enhance clarity. Several styles of assembly drawings are commonly used.



## Aligning Parts in an Assembly

### Features of Assembly

- Assembled or exploded view
- Include sections
- Omitting the dimensions
- Hidden-lines not necessary
- Lider lines with (ballooned or not)
- Part list (bill of materials)



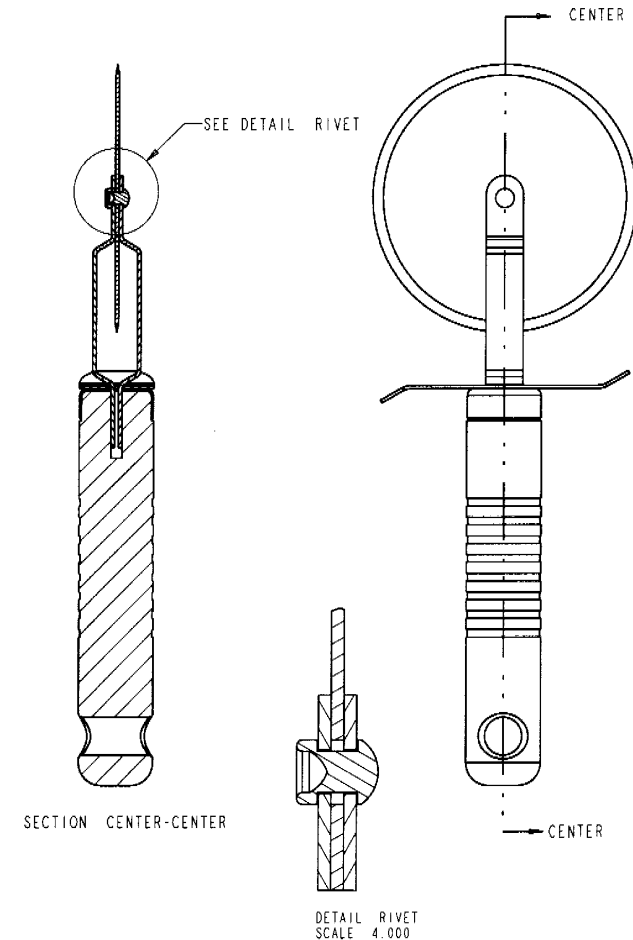
# Aligning Parts in an Assembly

## Assembly Sections

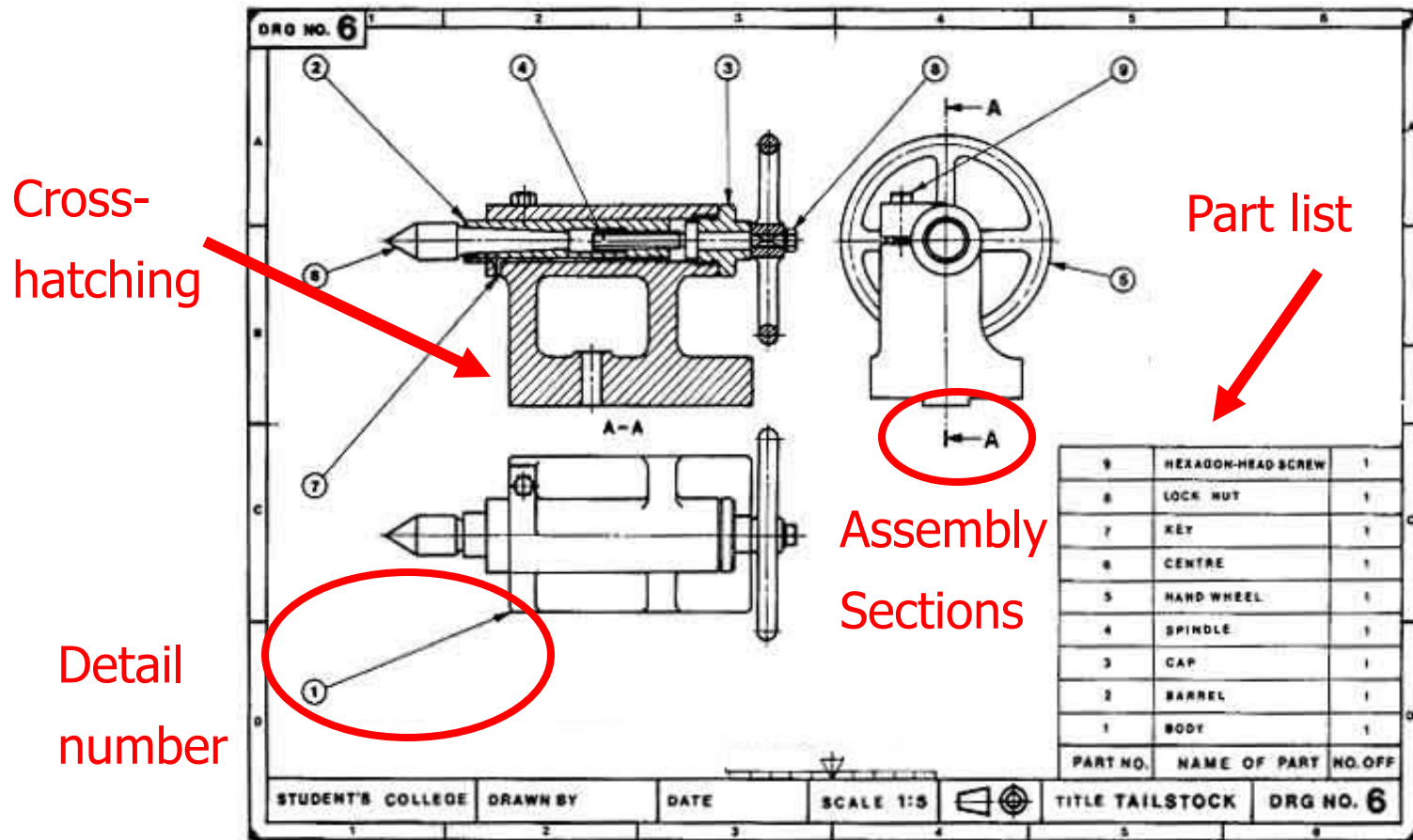
These are typically orthographic or pictorial section views of parts as put together in an assembly.

Adjacent parts in assembly drawings are cross-hatched at different angles to make the separate parts clean.

Usually standard parts such as fasteners, washers, springs, bearings, and gears are not cross-hatched.



# Aligning Parts in an Assembly





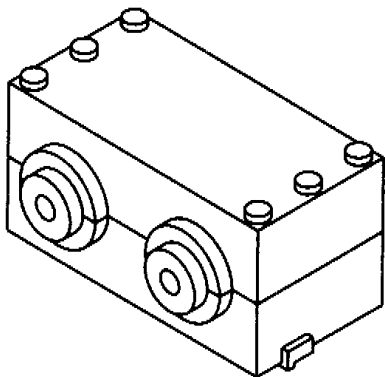
## Aligning Parts in an Assembly

---

### **Exploded Assembly**

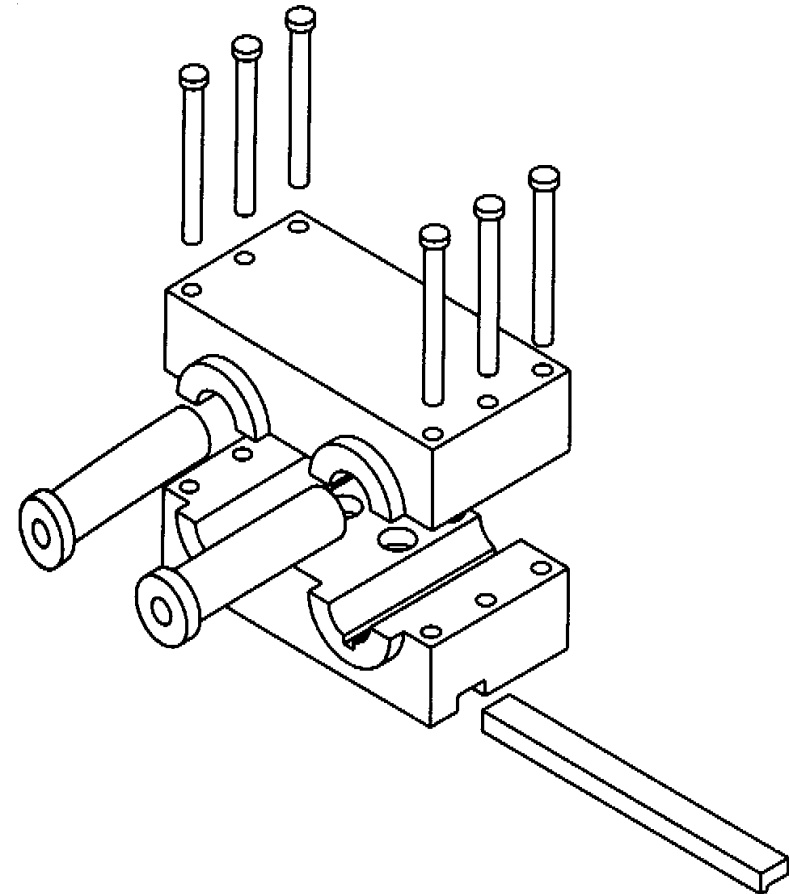
When components are added to an assembly, they are placed in their functional orientation and location.

Within the technical language of engineering drawing, assembly drawing is used to display the location of assembled components.



## Aligning Parts in an Assembly

To make the assembly drawing legible, the assembly can be exploded to separate components





## Aligning Parts in an Assembly

---

### **BILL OF MATERIALS (OR PART LIST)**

When all parts in an assembly drawing have to be identified, each single part is usually labelled by means of a reference number.

The separate parts comprising the assembly are located in the drawing by leaders radiating from the circles and are usually listed in a parts list



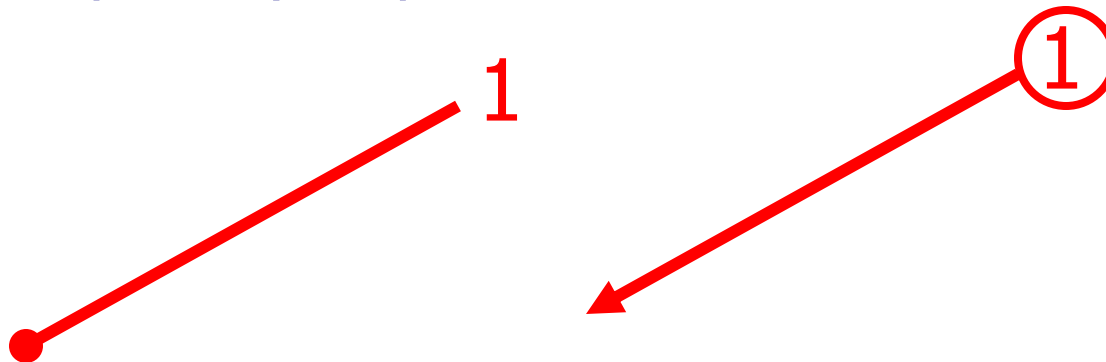


## Aligning Parts in an Assembly

---

A typical parts list might include the following:

- (a) the part number,
- (b) the name or description of the part,
- (c) the material from which the part is to be made,
- (d) the quantity required.



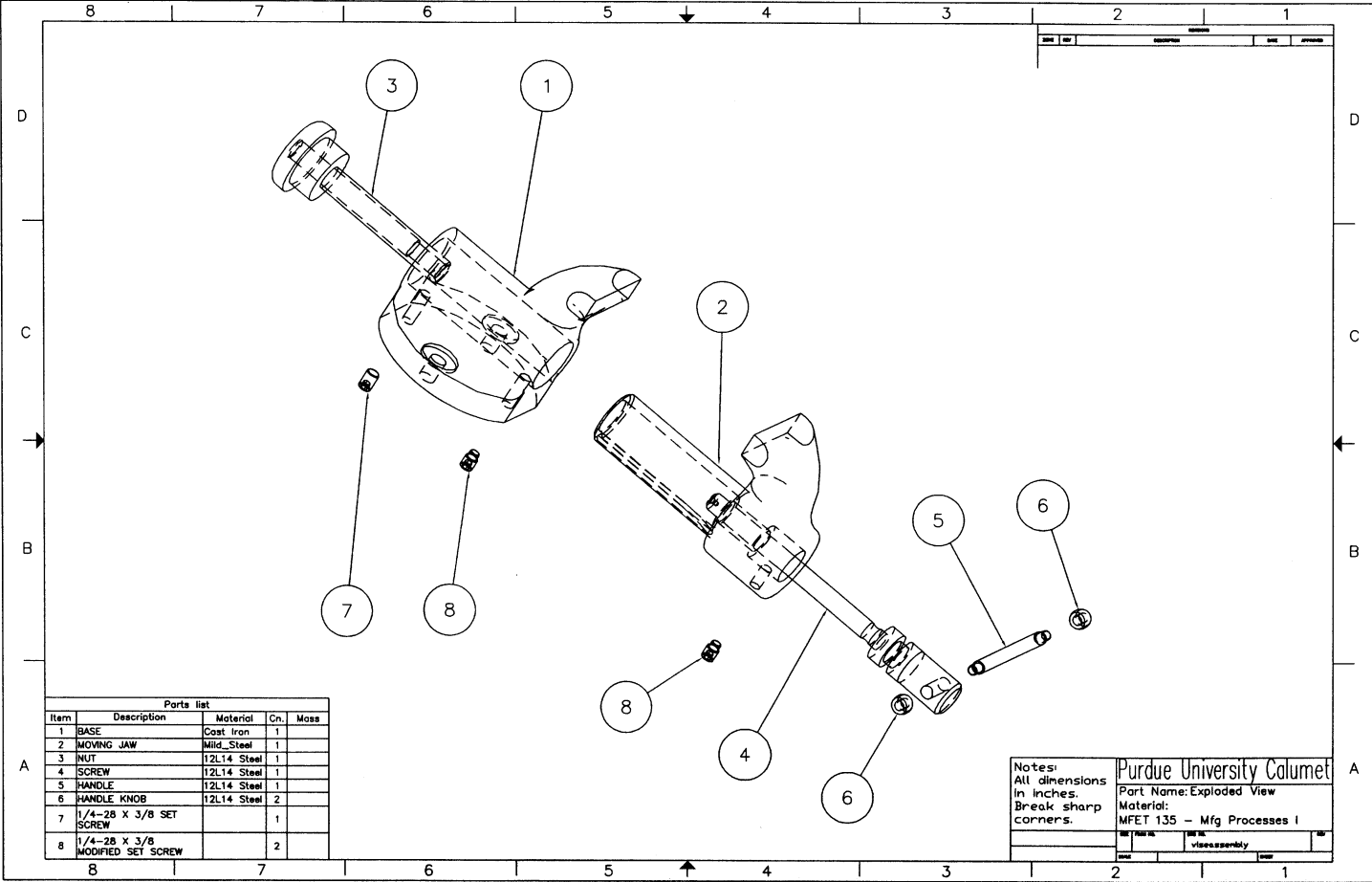
## Aligning Parts in an Assembly

Item	Part Name	Drg No	Material	Qty

	Part Name	Material	# Req'd
A	Base	CRS	1
B	Sliding Jaw	CRS	1
C	Jaw Plate	CRS	2
D	Flat Head Screw	Standard	4
E	Slide Key	CRS	2
F	Set Screw	CRS	2
G	Handle Ball	CRS	2
H	Vise Screw	CRS	1
I	Special Key	CRS	1
J	Collar	CRS	1
K	Handle Rod	CRS	1

	QTY.	PART NO.	DESCRIPTION
1	1	52806	handle
2	1	52825	cap
3	1	42886	guard
4	1	97512	rivet
5	2	55654	arm
6	1	56483	blade

# 12. Aligning Parts in an Assembly

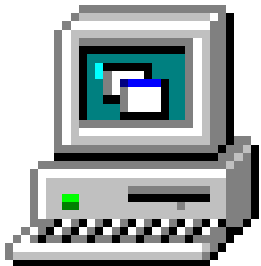


## 12. Aligning Parts in an Assembly

### Next Presentation ;

You will learn assembly modeling and assembling parts. The steps to follow are:

- Creating assembly and assembly modeling
- Assembly hierarchy
- Assembly constraints
- Configurations
- Assembly strategy
- Assignment # 9



## 12. Aligning Parts in an Assembly

### Assignment 9

You will draw an assembly using SolidWorks.

Don't forget to save it regularly!



Submit the assignment  
on time

