

EXPLODED VIEW DRAWINGS

STUDENT BOOK	Chapter 11, page 348
TOOLBOX	Page 81

GOAL

Dismantle an object (a doorknob) to illustrate it in an exploded view drawing.

OBSERVATION CRITERIA

1. What is an exploded view drawing?

2. What are the other types of engineering drawings often used in industry?

3. What information is often given in the nomenclature of parts provided in an exploded view drawing? Provide all relevant information.

MATERIALS

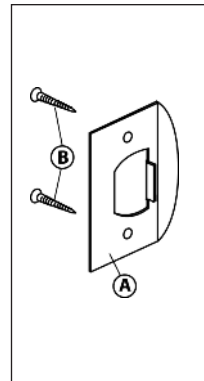
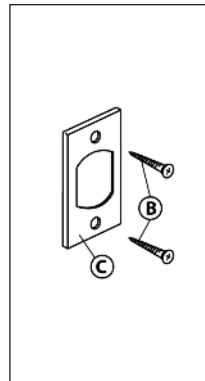
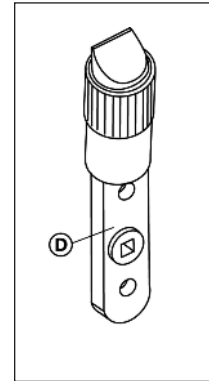
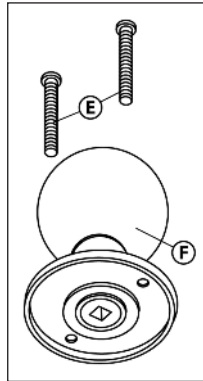
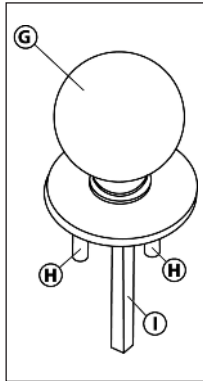
- doorknob
- crosshead screwdriver
- scissors
- glue

PROCEDURE

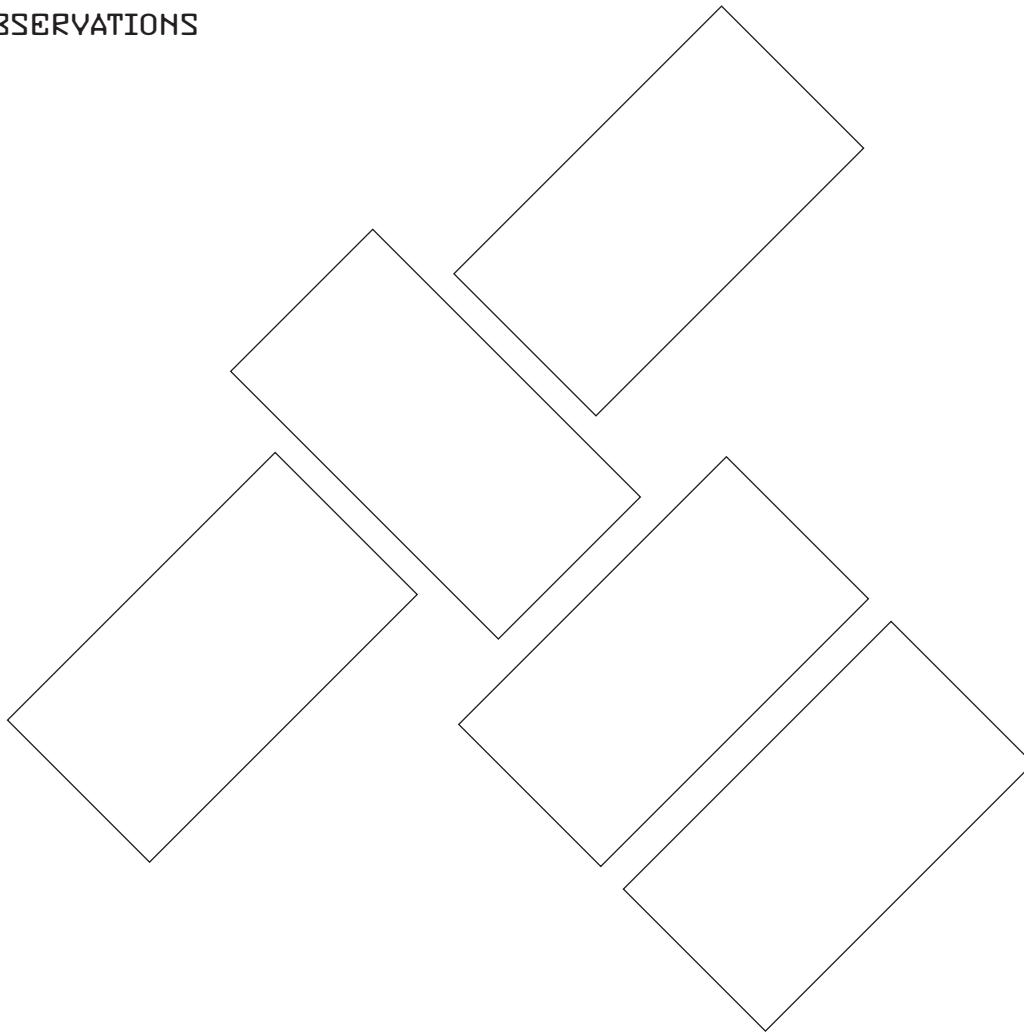
1. Cut out the doorknob parts illustrated on page 29.
2. Find the various parts illustrated on the doorknob itself.
3. Dismantle the doorknob to separate the parts shown in the drawing. While you do so, pay attention to how these parts are put together.
4. With the help of these observations:
 - a) Create an exploded view drawing of the doorknob by gluing the parts you have cut out into the frame designated for this purpose on the observation sheet (see page 31).
 - b) Fill in the table of the nomenclature of parts below this frame.
5. Record (on page 32) any differences you see between the parts of the doorknob and the drawings made of them.
6. Now carefully put the doorknob back together so that it is just as you found it at the start of this lab.



Parts of a doorknob (to be cut out)



OBSERVATIONS



Parts nomenclature			
Letter	Number	Name	Materials
A		Strike plate	Metal
B		Screw	
C		Faceplate	
D		Latch bolt	
E		Bolt	
F		Interior knob	
G		Exterior knob	
H		Screw post	
I		Spindle	

NAME:	DATE:
TITLE:	SCALE:

© ERPI Reproduction permitted solely for classroom use with Observatory.



Differences between parts of a doorknob and drawings of them:

REFLECTING ON YOUR OBSERVATIONS

1. Did you find it difficult to dismantle the doorknob? If so, describe the difficulties.

2. Did you find it difficult to reassemble the doorknob? If so, describe the difficulties so you can avoid them in future.

3. What could explain possible differences between parts and drawings of them?

4. A purchased doorknob is usually packed as separate parts. How can an exploded view drawing of the doorknob be helpful in installing it?
