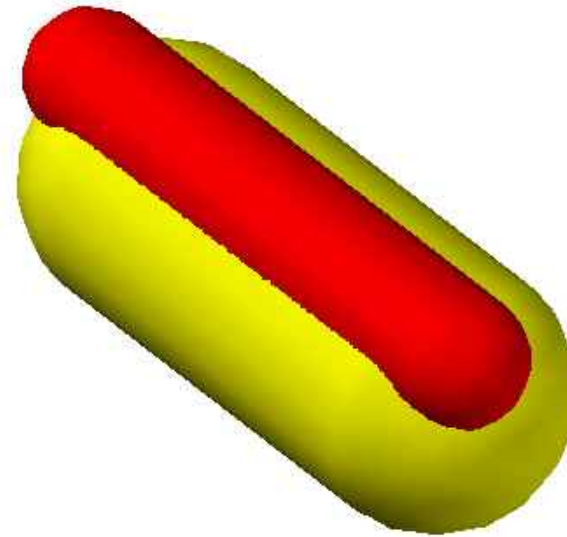


# The Language of Drawing

## Chapter 4:

## Sectional Views

Here is a picture of a hot dog.

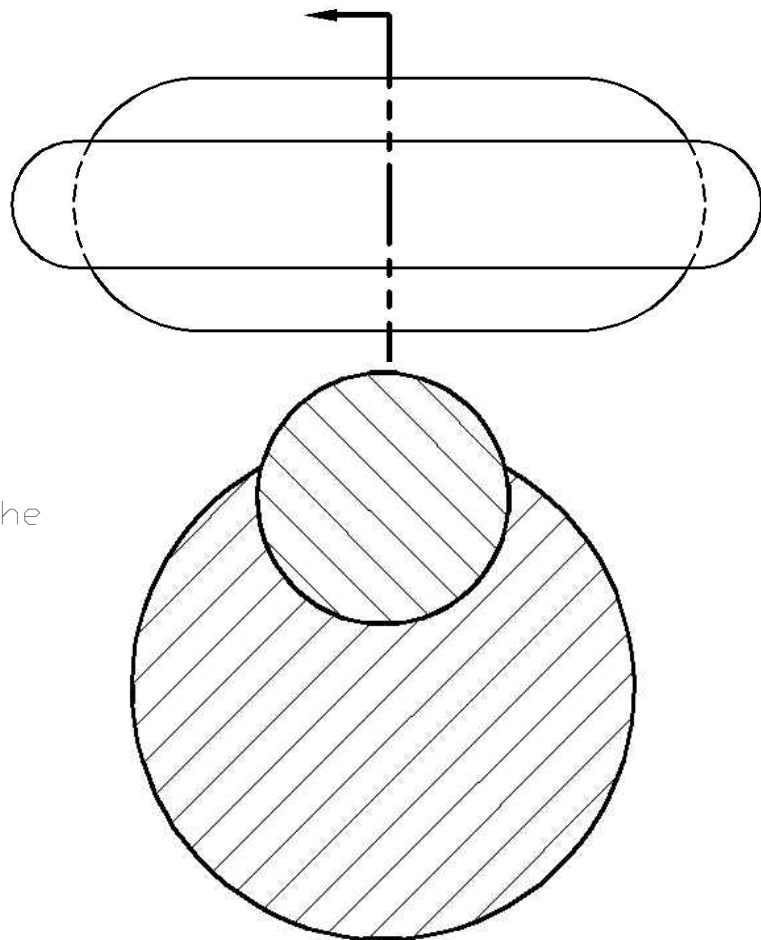


This hot dog can be drawn using the three orthographic views that we have been using: top, front and right side.

However, by looking at the drawing, we can't really tell what the hot dog is

made of. It could be a real all beef frank on a bun, or it could be a plastic chew toy. To show this extra detail, we will use a sectional view.

Below, we have added another detail to the top view of the hot dog. This line is called a CUTTING LINE. It consists of a phantom line that extends past the edges of the drawing. An arrow on each end of the phantom line points towards the side to which the section view will be directed.

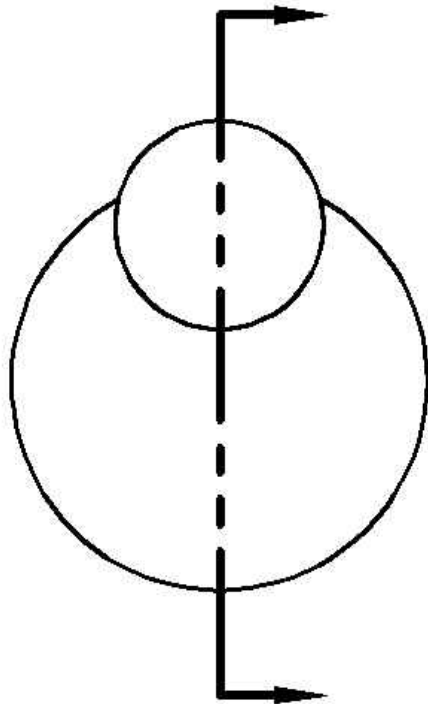


phantom line has a long dash and then two small dashes. For shorter phantom lines, the two small dashes are placed in the center and no long dash appears, other than to extend outside the drawing. Phantom lines are usually twice as thick as continuous and hidden lines.

Above is the sectional view defined by the cutting line in the drawing to the left. As you can see, it looks very similar to the right side view drawing, except for the diagonal lines running through the middle. These lines are called HATCHING LINES and are used to define different types of materials. As there are no specific hatching patterns to show hot dog meat or bun, the two sections are hatched with the standard pattern for any material.

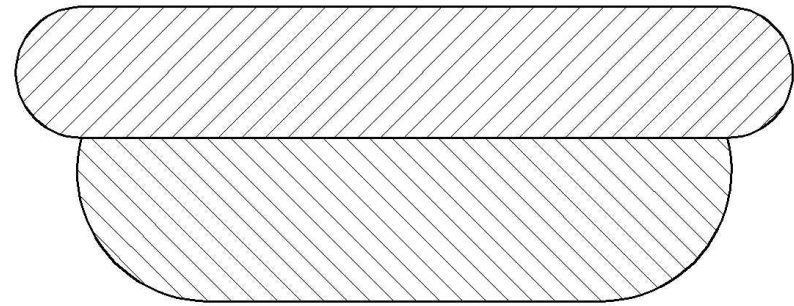
Notice that the two parts in the

drawing have hatching lines at a differing angles. Separate parts always have hatch lines with offset angles, usually at 90°, but sometimes 30° or 60°, depending on the number of parts.



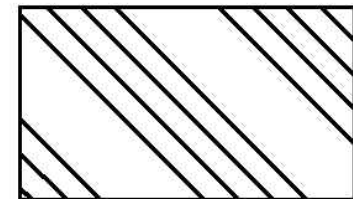
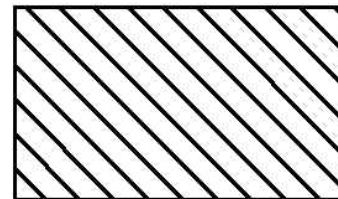
Here is another example of a sectional view. To the left is the right side view with a cutting line splitting the hot dog down the center. Below is the sectional view of the hot dog, complete with hatching. Though the bun does wrap up around the hot dog on the outsides, those details have been omitted. Had they been included, they

would have been drawn as hidden lines, and in most cases, hidden lines are not drawn in sectional views.



Pictured above is the same sectional view of the hot dog. Practice drawing your own hatching lines using the outline above, referring to the view in the bottom left-hand corner of the page if you have trouble.

Solid lines are the standard for hatching and can refer to any material. However, some materials have specific hatching patterns. For example:



General Materials

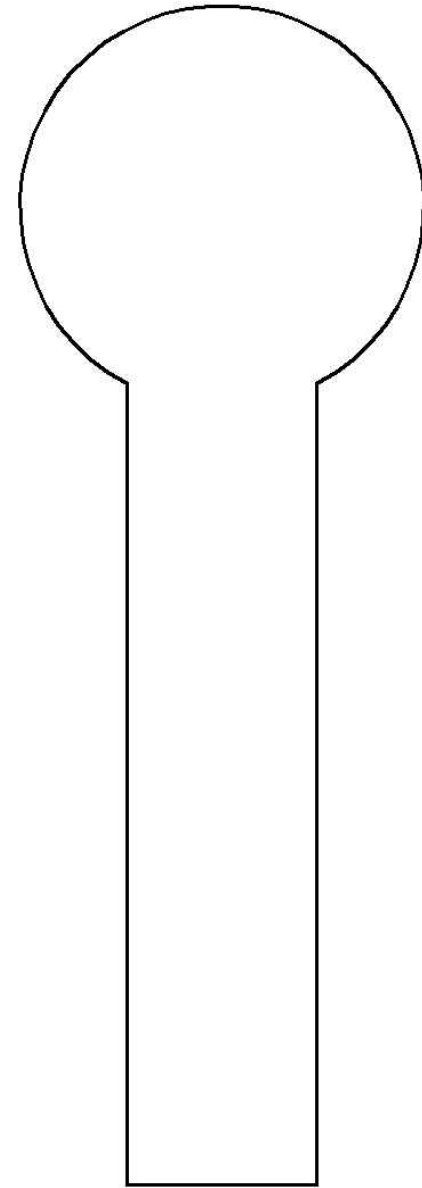
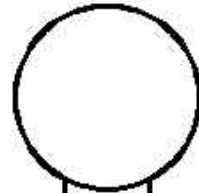
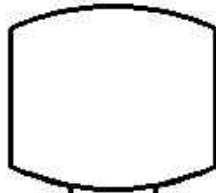
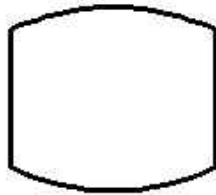
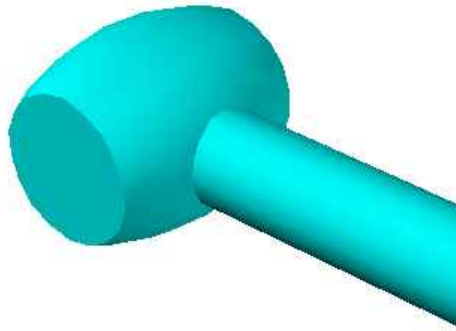
Rubber, Plastic

mallet. Draw the cutting line that corresponds to the sectional view on one of the orthographic views shown here. Then hatch the sectional view with the correct hatching pattern from the examples on the last page.

Bronze, Brass,  
Copper

Steel

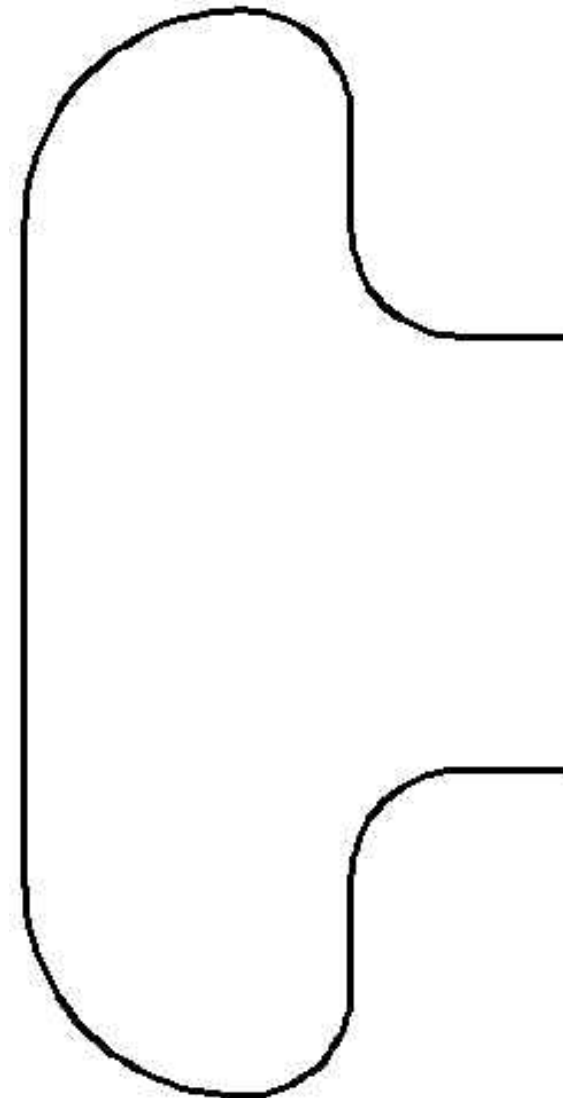
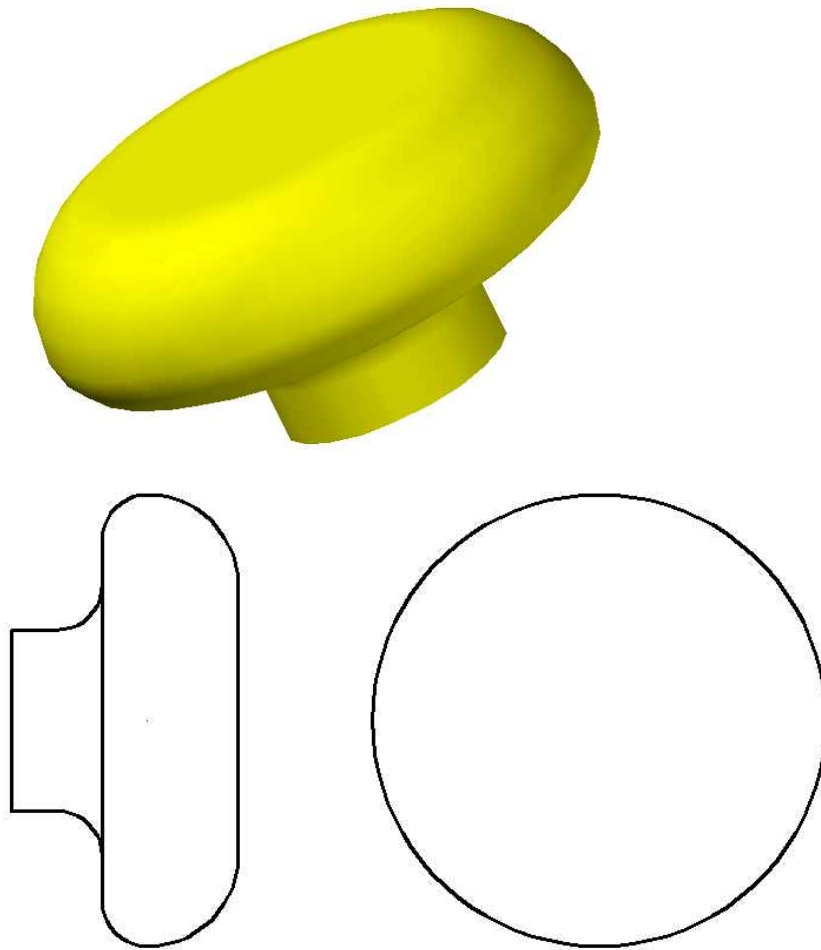
Here is a mallet made of steel.



To the far right is a sectional view of the

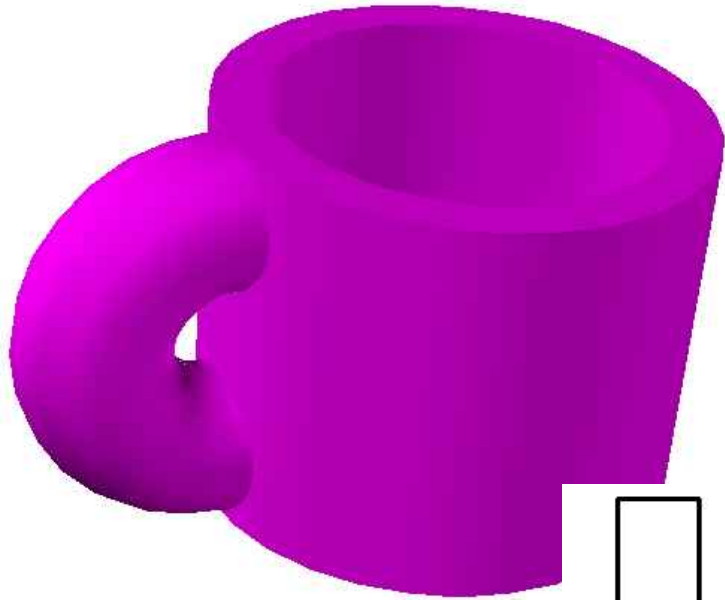
To the right is a sectional view of the doorknob. Draw the cutting line that corresponds to the sectional view on one of the orthographic views shown below. Then hatch the sectional view with the correct hatching pattern from the examples.

Here is a brass doorknob.

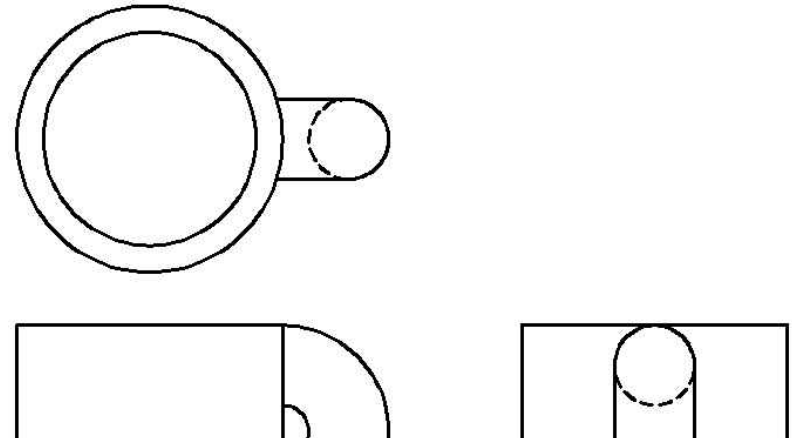


sectional view with the correct hatching pattern from the examples.

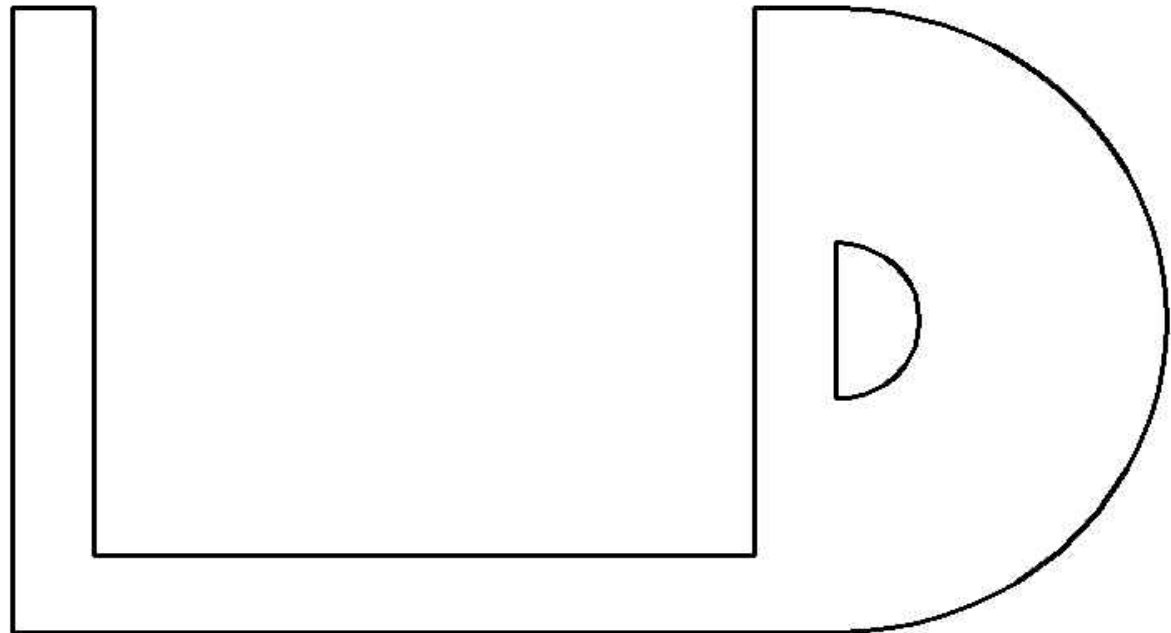
Here is a plastic mug.

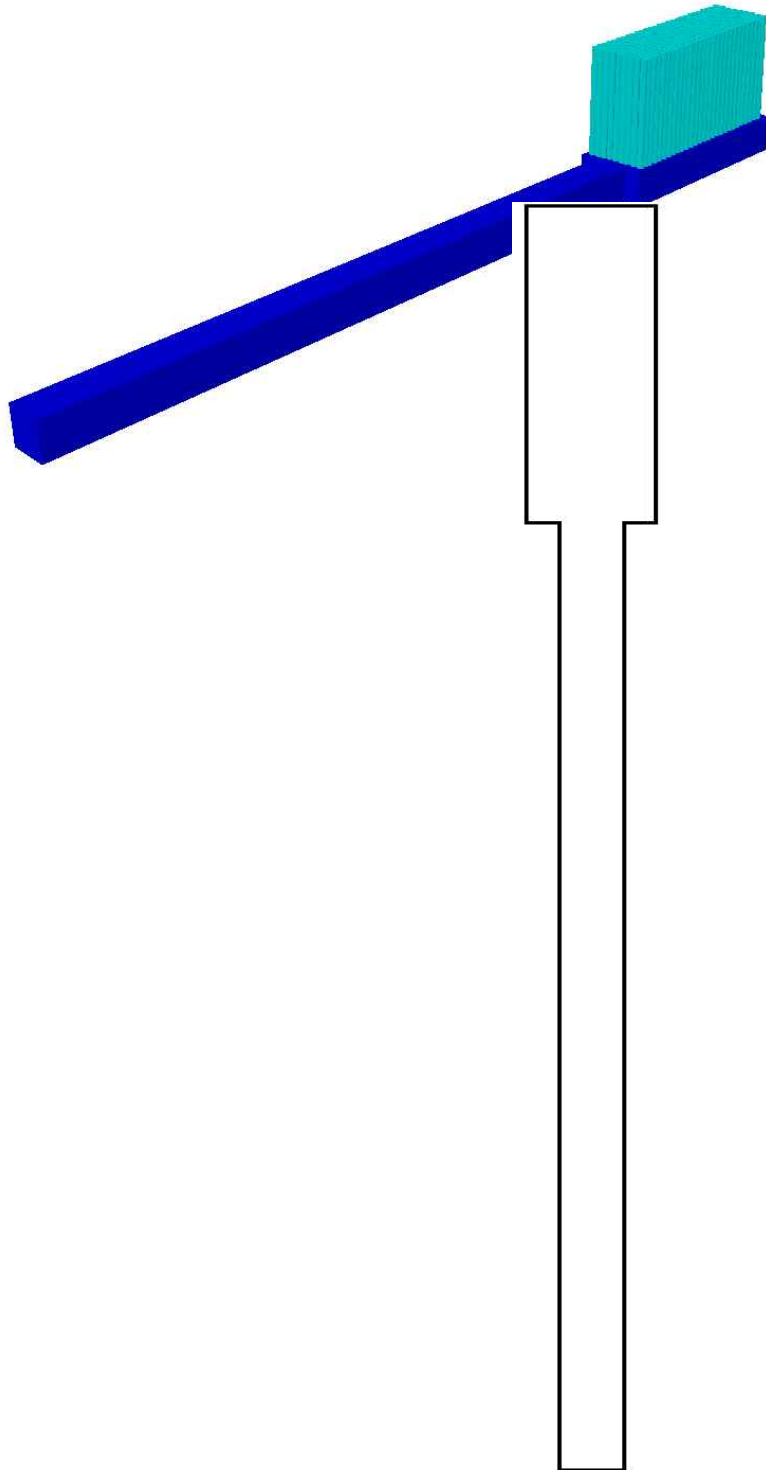


Here is a plastic toothbrush.



To the right is a sectional view of the mug. Draw the cutting line that corresponds to the sectional view on one of the orthographic views shown above the sectional view. Then hatch the





To the right is a sectional view of the toothbrush. Draw the cutting line that corresponds to the sectional view on one of the orthographic views shown to the left. Then hatch the sectional view with the correct hatching pattern from the examples.