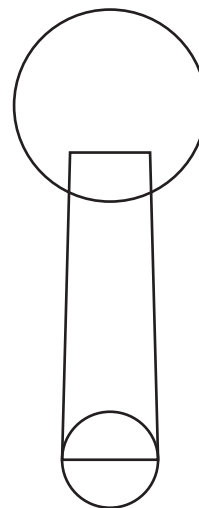
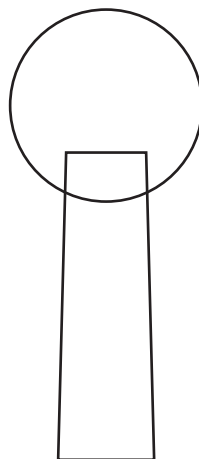
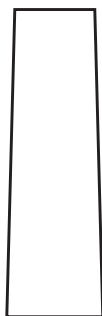
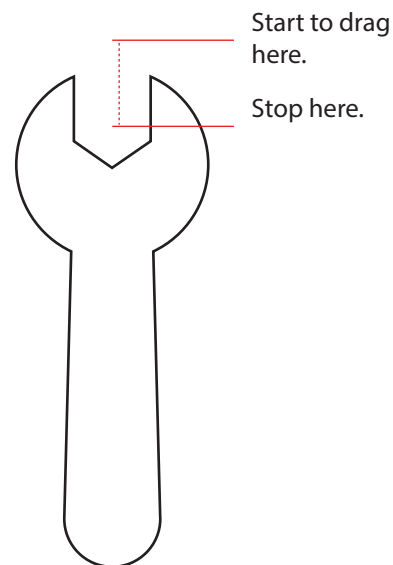
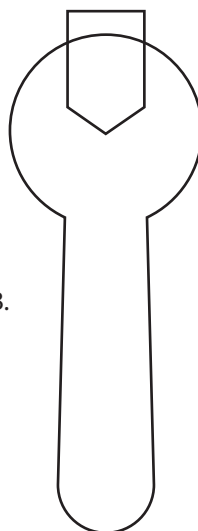
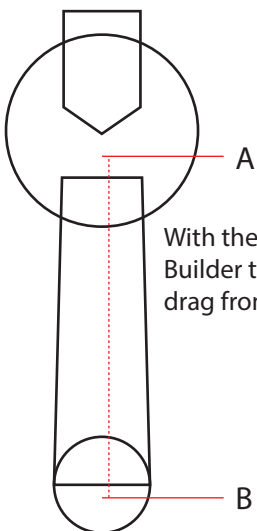
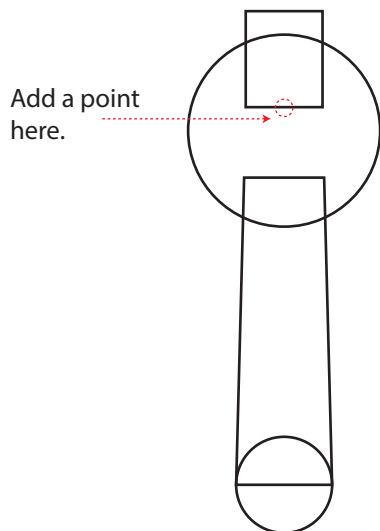


Shape Builder Exercise



First draw a rectangle 0.5" x 1.75"
 Use the Direct Selection tool, select the upper right hand node, use the left arrow key, press three times.
 Use the Direct Selection tool, select the upper left hand node, use the right arrow key, press three times.

Draw 2 circles.
 The top circle is 1" x 1", the bottom circle is 0.5" x 0.5".
 Make sure they all align vertically. Turn on the Smart Guide (View > Smart Guide)



With the Shape Builder tool, drag from A to B.

Draw 1 rectangle, 0.4" x 0.5", and position it as shown.
 Use the Add Anchor Point Tool (grouped with Pen tool) to add a point at the bottom center of this rectangle.
 Select the newly added point, hold down the Shift key and press the down arrow once.

Another way to add points is by selecting the rectangle, then go to Object > Path > Add Anchor Points

Select the top circle, the long rectangle, and the bottom circle. Select the Shape Builder tool (Shift + M) and drag across these three shapes, they will be united as one shape.

Select the 2 shapes, select the Shape Builder tool, hold down the Alt key, and drag from the top down.



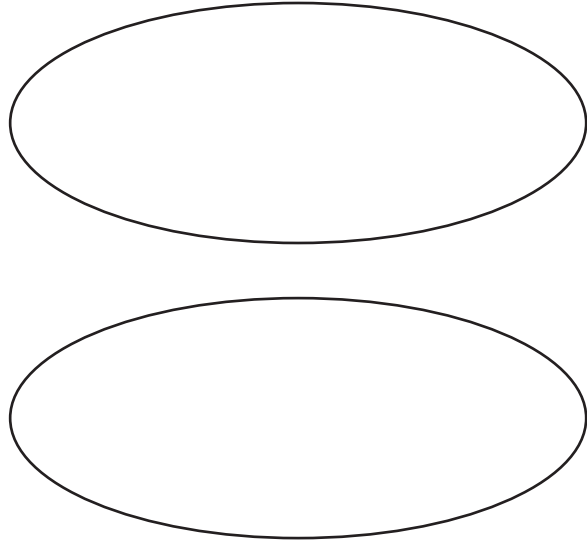
Select the shape, assign a color, take away the black stroke.

With the Ellipse tool selected, draw a small circle at the bottom of the wrench.

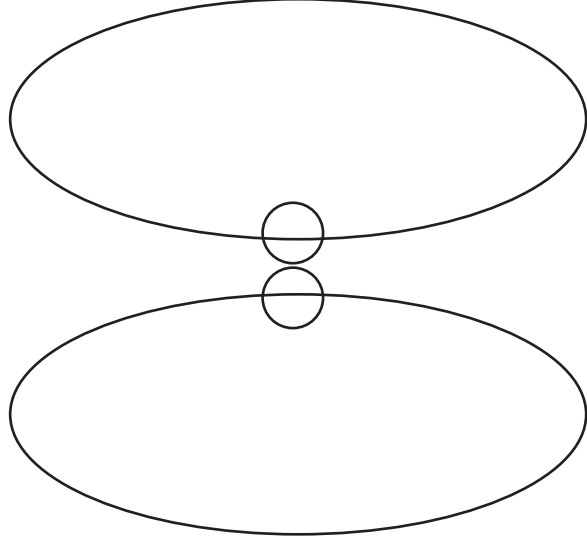


Before drawing the oval, go to the Tool Box, make sure fill is none, stroke is black.

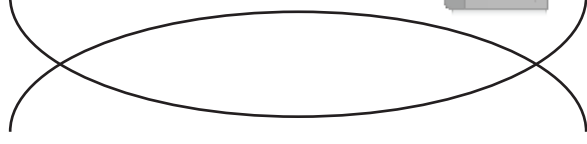
Drawing A Fish with Ellipse Tool



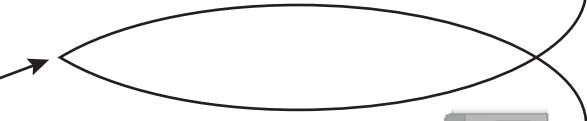
Use the Ellipse tool to draw a 1.25" x 3" oval. Select the oval, hold down the Shift and Alt key, drag it to the right to make a duplication.



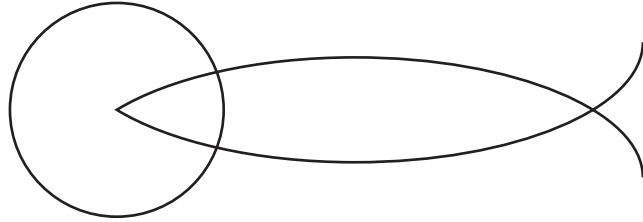
Using the Direct Selection tool (white arrow), select the marked nodes, and hit delete.



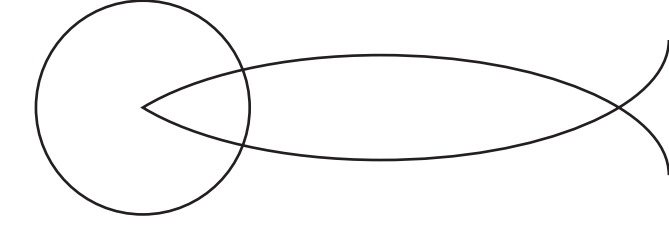
Hit here with the Join Tool



Select the Join tool, which is grouped with the Shaper Tool

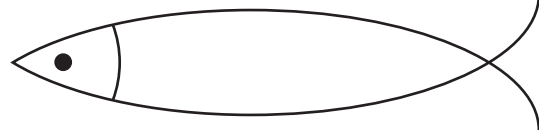
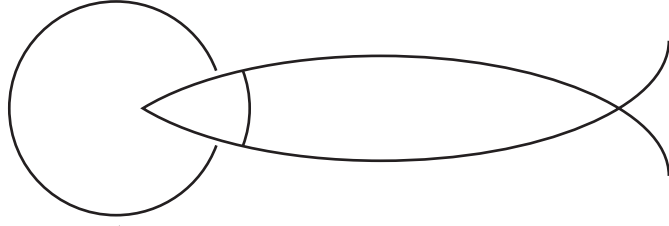


With the Ellipse tool selected, place the cursor at the top of the oval shape, hold down the Shift+Alt to draw a circle from the center out. The size of the circle doesn't matter.



Select this open circle.

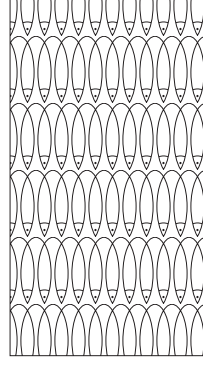
Select the Scissors tool, which is grouped with the Eraser tool. Click where the circle and the oval intersect. Delete the rest of the circle.



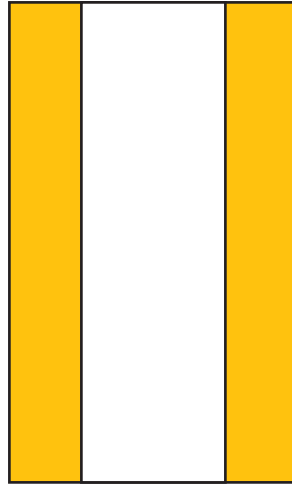
With the Smart Guide (View>Smart Guides) on, draw a small black circle to make up the eye of the fish.



To make a fish pattern, group the drawing, and drag it to the Swatches panel.



Drawing A Screwdriver



Double-click on the Fill Switch, enter 25 for Magenta, and 100 Yellow in the Color Picker.

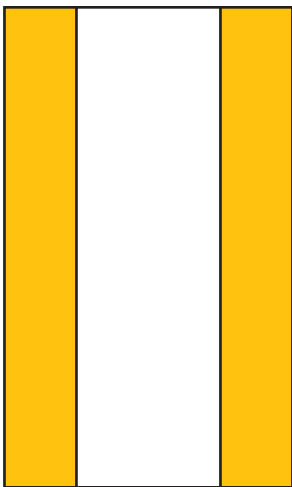
Select the rectangle tool, position the cursor at the upper left hand corner of the first rectangle. Click once to open up the Rectangle dialog box. enter 1.5" for width. Height should still be 2.5".

To move the yellow box to the left, in the Properties panel, in the X field, enter -0.375" behind the current value and press Enter.

Alternately, you can use the Align command to center align both rectangles.

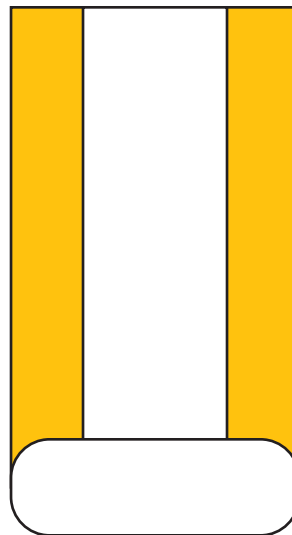
To move the yellow rectangle behind the first rectangle, go to Object > Arrange > Send to Back.

Select the rectangle tool, click once on the artboard, in the Rectangle dialog box, enter 0.75" for width and 2.5" for height. This will be the main body for the screwdriver.



Press the "D" key to reset the Fill and Stroke swatches back to default.

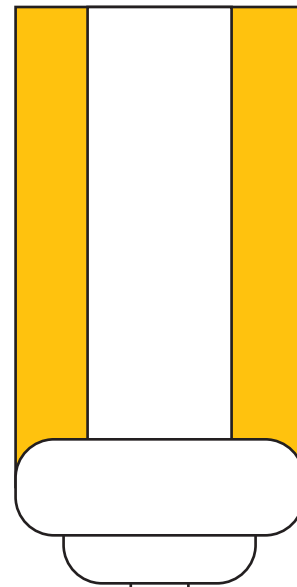
Draw another 0.3" and 3" rectangle, and position it right under the 2 existing rectangles.



Select the Rounded Rectangle tool, click once on the artboard, enter 1.5" for width, 0.5" for height and 0.2" for Corner Radius.

Align its center to the bottom of the 2 overlapping rectangles as shown.

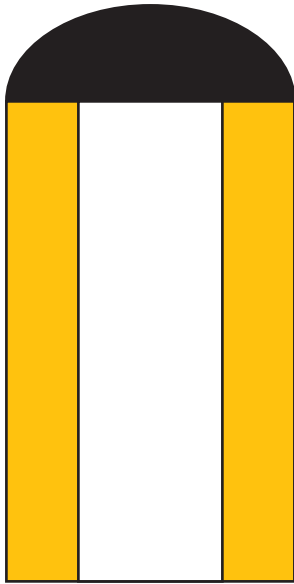
Send it behind the 2 rectangles



With the Selection tool, press the Shift and Alt key and drag the bottom edge of the rounded rectangle straight down to duplicate it. Drag until the word "intersect" appears, indicating that the center of the shape is aligned with the bottom of the first rounded rectangle.

With second rounded rectangle still selected, in the transform panel, change the width to 1", and the height remains the same.

Select the first rounded rectangle and bring it to the front (ctrl + Shift +]).



Select the Ellipse tool, position the cursor at the upper left hand corner of the first rectangle. Click once to open up the Ellipse dialog box. enter 1.5" for width. Height should still be 1".

Move it up until the center of the ellipse align with the top of the rectangle. Turn on outline mode (ctrl + Y) for a better view.

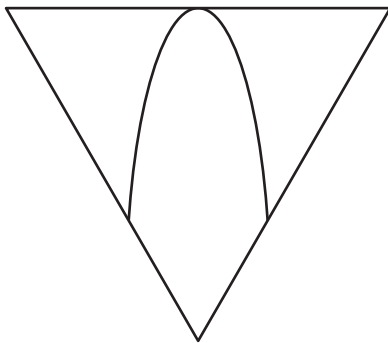
Send it to the back. Give it a 1pt. black stroke.



Use the Polygon tool to draw a triangle the same width with the long rectangle (0.3").

Use the down or up arrow to change the sides until you got the triangle. Hold down the Shift key to draw a horizontal triangle, then rotate it CW or CCW twice.

Position it at the bottom of the rectangle. If the corners are sticking out, in the Stroke panel, change the Corner to Round Joint.



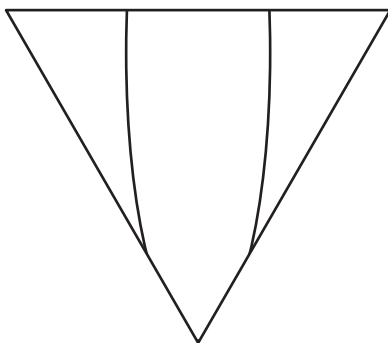
Select the triangle, select the Draw Inside mode (shift + D + D) at the bottom of the Toolbar. The triangle will be surrounded by 4 dotted brackets at the corners, indicating it is in a Draw Inside mode.

Select the ellipse tool, draw an ellipse inside. Don't worry about drawing the correct size right now.

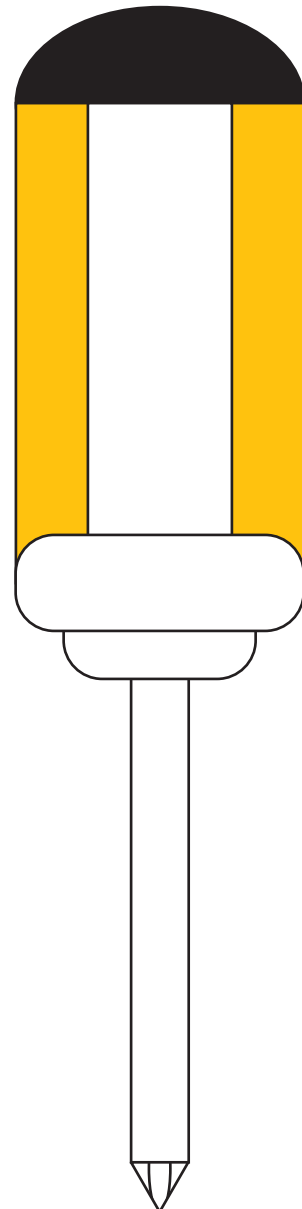
Double-click the triangle to enter Isolation mode. Select the ellipse, in the Transform panel, change its size to 0.45" wide and 1.15" in height.

While you are at it, move it up until the bottom of the ellipse align with the bottom of the triangle.

Use Shift + D to get out of the Draw Inside mode.



(Enlarged version)



Final drawing