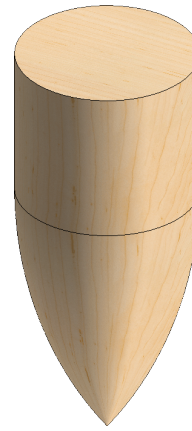




Spinning Top Axle Tip



A. Lines and Tangent Arc.

Step 1. Click File Menu > New, click **Part** and OK.

Step 2. Click **Right Plane**  in the Feature Manager and click **Sketch**  on the context toolbar, **Fig. 1**.

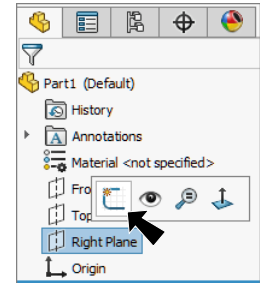


Fig. 1

Step 3. Click **Line**  (L) on the Sketch toolbar.


Step 4. Sketch **3 lines** starting from Origin . Autotransition to Tangent Arc tool and sketch tangent arc back to the Origin at bottom endpoint of centerline, **Fig. 2**. To autotransition to arc, after sketching endpoint, move cursor away and back. The preview shows a tangent arc. Click to place the arc.



Fig. 2

Tip: Toggle between line and arc without returning to the endpoint, use A key.

Step 5. **Right click graphics area and click Select** from menu to unselect Line tool.


Step 6. **Click long vertical line on right and click Construction Geometry**  on the context toolbar, **Fig. 3**.



Fig. 3

Step 7. Click **Smart Dimension**  (S) on the Sketch toolbar.

Step 8. Add dimensions, **Fig. 4**. Double distance dimension across horizontal line. To double distance dimension, click the vertical line and then the centerline, move the cursor to right side of the centerline and click. Key-in 1 and press ENTER.

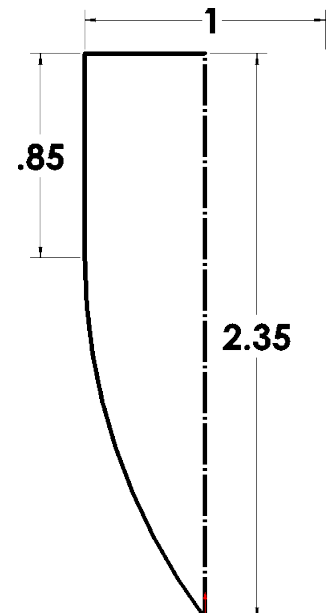


Fig. 4

B. Save as "AXLE TIP".

Step 1. Click File Menu > Save As.

Step 2. Key-in **AXLE TIP** for the filename and press ENTER.

C. Revolve.

Step 1. Click **Features**  on the Command Manager toolbar.

Step 2. Click **Revolved Boss/Base**  on the Features toolbar.

Step 3. Click **Yes** to close sketch.

Step 4. In the Revolve Property Manger:
click OK .

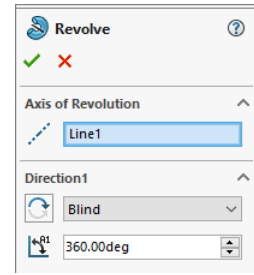


Fig. 5

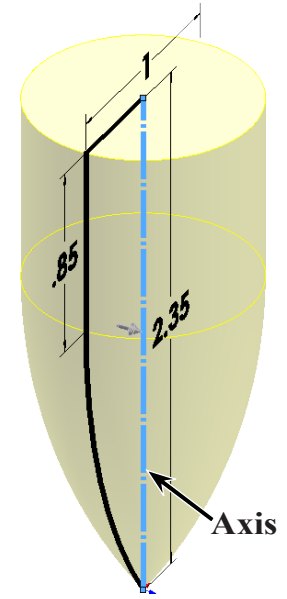



Fig. 6

D. Material Maple.

Step 1. **Right click** **Material**  in the Feature Manager and click **Edit Material**, Fig. 7.

Step 2. Expand **Woods** in the material tree and click **Maple**. Click **Apply** and **Close**, Fig. 8.

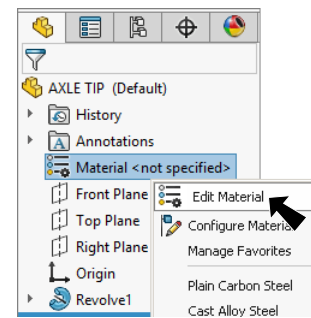


Fig. 7

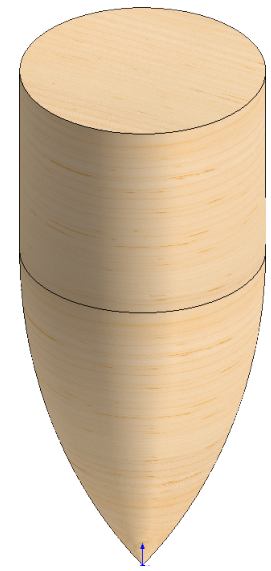




Fig. 8

E. Rotate Mapping.

Step 1. **Ctrl click both cylindrical faces** to select both faces, click **Appearance Callout**  on the context menu and click **Face<1>...**  Fig. 9.

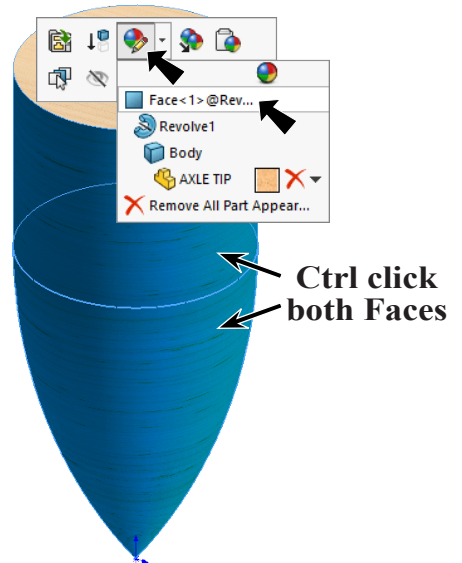

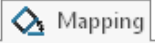


Fig. 9

Step 2. Click **Appearances, Scenes, and Decals**  tab to display Task pane, Fig. 10
 expand **Appearances**
 expand **Organic**
 expand **Wood**
 click **Maple** and in the lower pane select **polished maple 2d**.

Step 3. Over in the Appearances Property Manager, click **Advanced button**, Fig. 11
 click **Mapping tab**  under Size/Orientation

Width  .95
 Rotation 90

click OK .

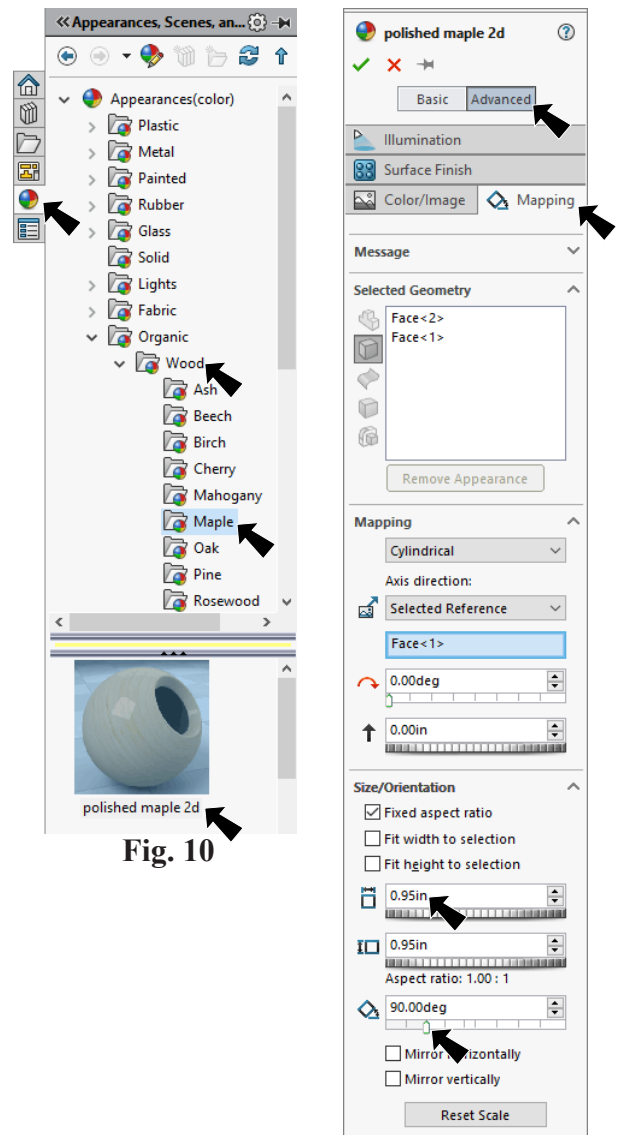


Fig. 10

Fig. 11

Step 4. Save. Use **Ctrl-S**.

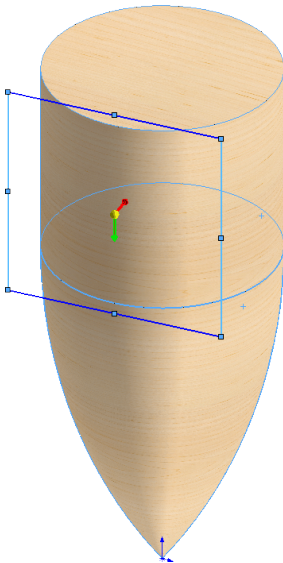


Fig. 12

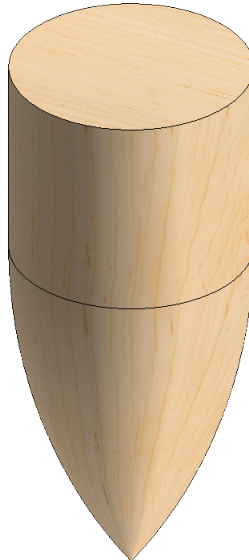


Fig. 13