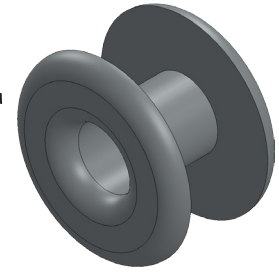




Rivet for Battery Holder



A. Rivet.

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

Step 2. Click **Front Plane**  in the Feature Manager and click **Sketch**  from the Context toolbar, **Fig. 1**.

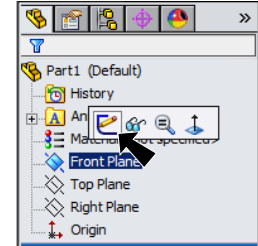


Fig. 1

Step 3. Click **Circle**  (S) on the Sketch toolbar.

Step 4. Draw **two circles** at the Origin  **Fig. 2**.

Step 5. Click **Smart Dimension**  (S) on the Sketch toolbar.

Step 6. Dimension **diameters 1.75** and **5**, **Fig. 2**.

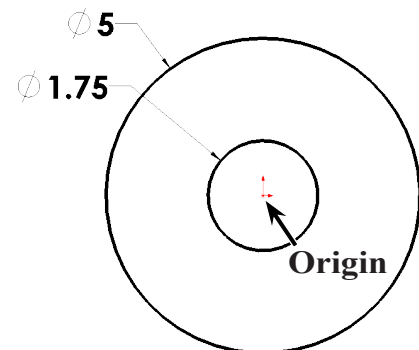
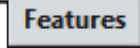




Fig. 2

Step 7. Click **Features**  on the Command Manager toolbar.

Step 8. Click **Extruded Boss/Base**  on the Features toolbar.

Step 9. In the Property Manager set:
under Direction 1, **Fig. 4**
End Condition **Mid Plane**

Depth  **3.3**
click OK .

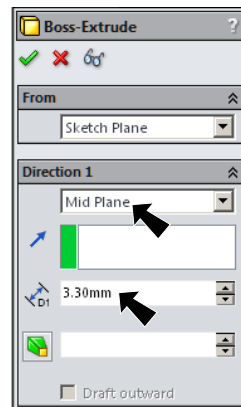


Fig. 3

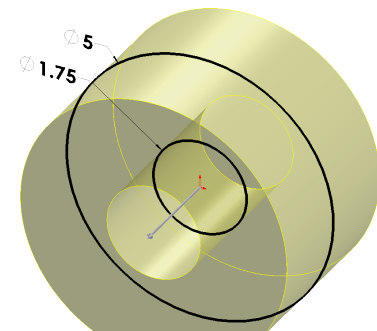


Fig. 4

Step 10. Click **Zoom to Fit**  (F) on the View toolbar.

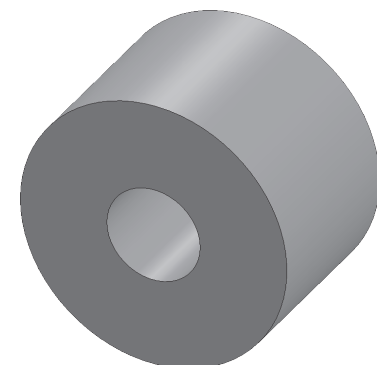



Fig. 5

B. Save as "RIVET".

Step 1. Click File Menu > Save As.

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

C. Fillet.

Step 1. Click **Fillet**  on the Features toolbar.

Step 2. In the Fillet Property Manager:
select **FilletXpert**, Fig. 6

Radius  .5

click **both inside and outside**
cylindrical faces, Fig. 7

click OK .

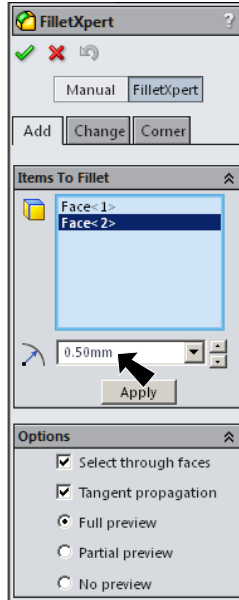


Fig. 6

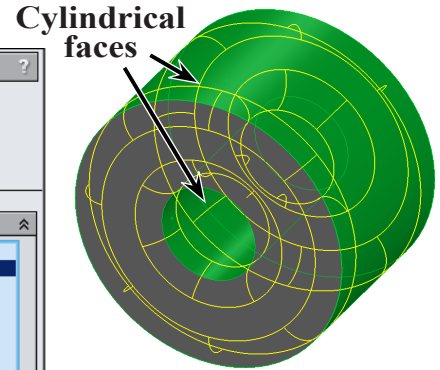


Fig. 7

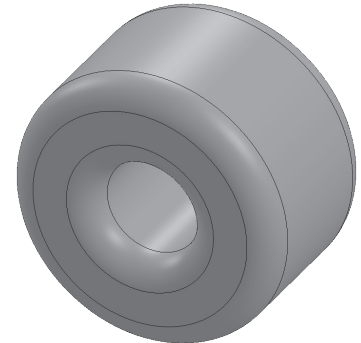




Fig. 8

D. Revolved Cut.

Step 1. Click **Right Plane**  in the Feature Manager and click **Sketch**  from the Context toolbar, Fig. 9.

Step 2. Click **Normal To**  on the Standard Views toolbar. (Ctrl-8)

Step 3. Click **Corner Rectangle**  (S) on the Sketch toolbar.

Step 4. Draw a **rectangle coincident with top edge of part and away from Origin** , Fig. 10.

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

Step 6. **Right click bottom line of rectangle** and click **Select Midpoint** from menu, Fig. 11.

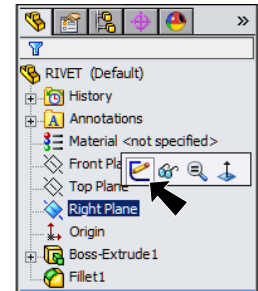


Fig. 9

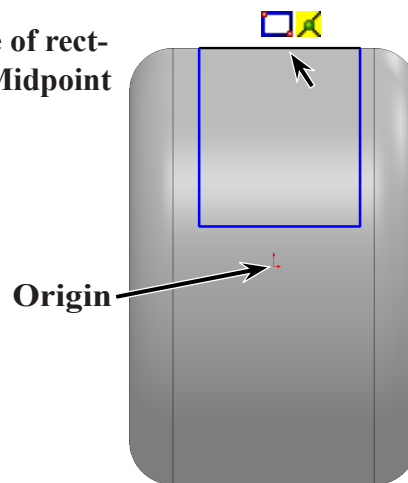


Fig. 11

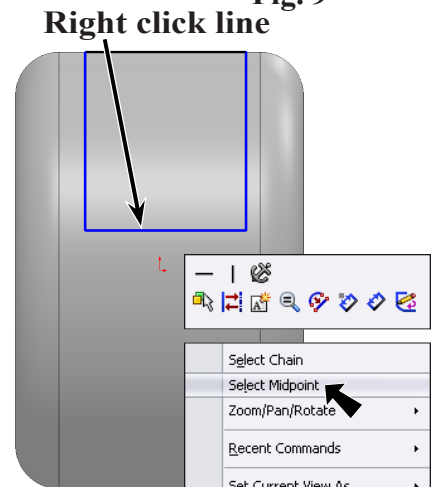




Fig. 12

Step 7. **Ctrl click Origin**  to select midpoint and Origin. Release Ctrl key and click **Make Vertical**  on the Context menu, **Fig. 12.**

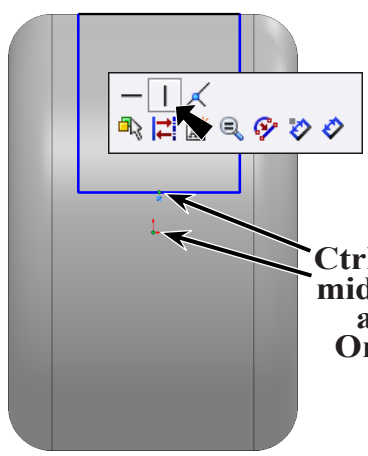


Fig. 12

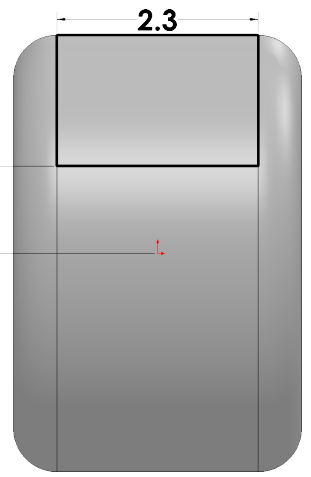
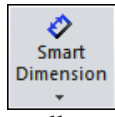




Fig. 13

Step 8. Click **Smart Dimension**  (S) on the Sketch toolbar.

Step 9. Add dimensions, **Fig. 13.**

Step 10. Click **Centerline**  in the **Line flyout**  on the Sketch toolbar.

Step 11. Draw **horizontal centerline from the Origin** , **Fig. 14.**

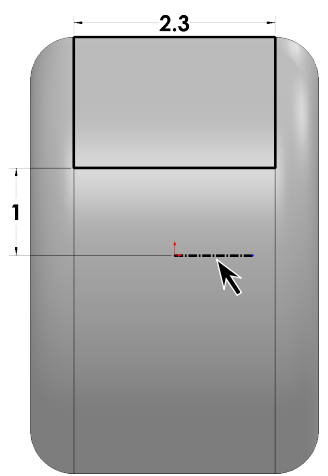





Fig. 14

Step 12. Click **Features**  on the Command Manager toolbar.

Step 13. Click **Revolved Cut**  on the Features toolbar.

Step 14. In the Cut-Revolve Property Manager set:
 under Axis of Revolution 
 centerline should be selected, **Fig. 15**
 click OK .

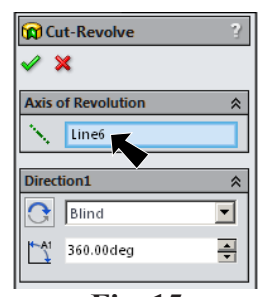


Fig. 15

Step 15. Save. Use **Ctrl-S.**

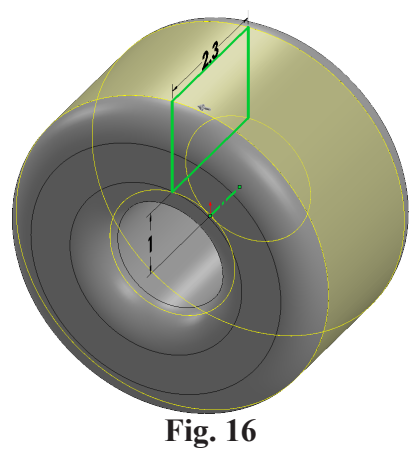


Fig. 16

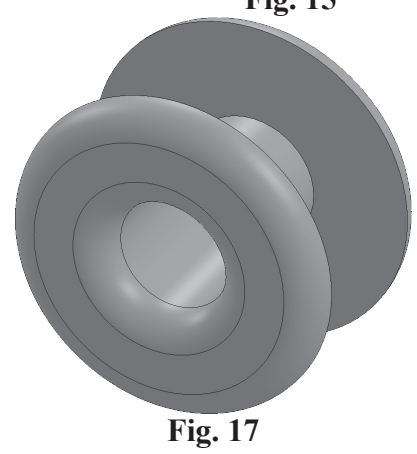





Fig. 17

E. Appearance.

Step 1. Click part to select, click **Appearance Callout**  on the Context toolbar and click **RIVET** , Fig. 18.

Step 2. In the Appearances Task pane, expand **Metal**, click **Chrome** and in the lower pane select **chromium plate**, Fig. 19. Click OK  in the Property Manager.

Step 3. Save. Use **Ctrl-S**.

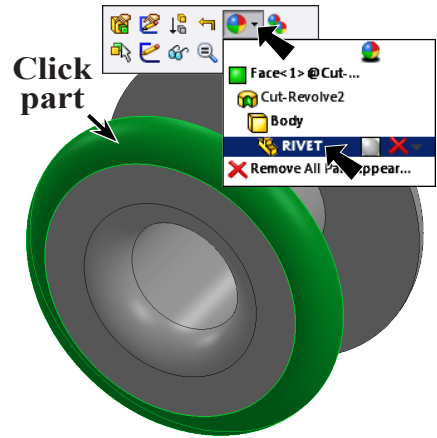


Fig. 18

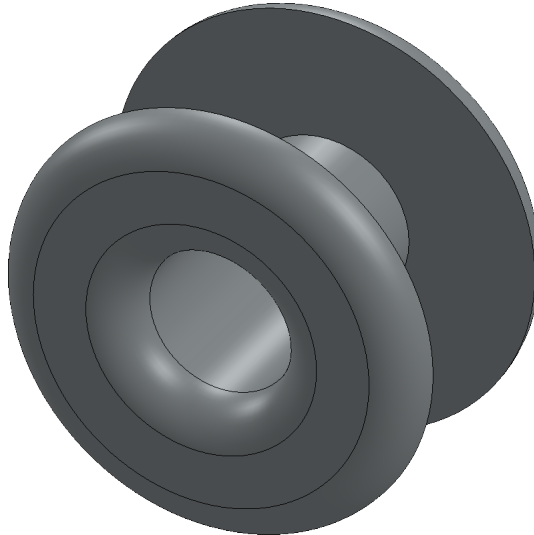


Fig. 20

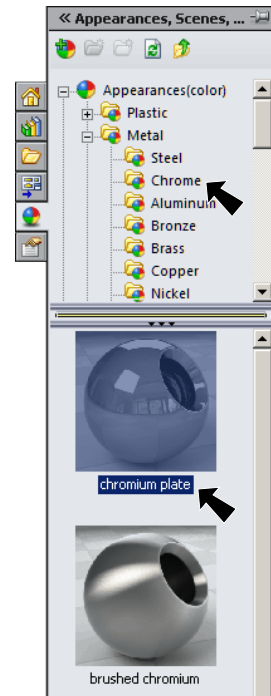


Fig. 19