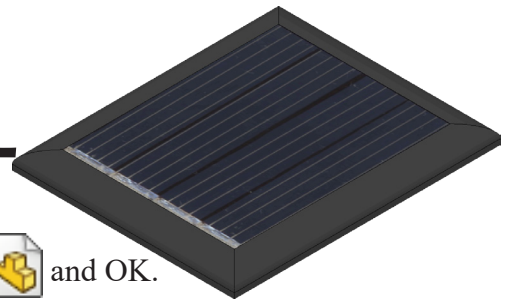




Chapter 7

Solar Train SOLAR PANEL



A. Extrude.

Step 1. Click **New**  on the Standard toolbar, click **Part Metric**  and OK.

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

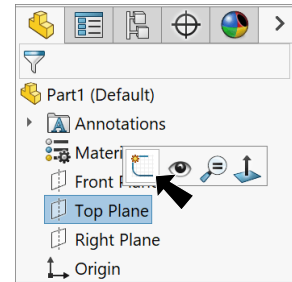


Fig. 1

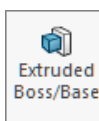
Step 3. Click **Center Rectangle**  in the **Rectangle** flyout  on the Sketch toolbar.

Step 4. Sketch center rectangle at Origin , **Fig. 2**.

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

Step 6. Dimension 30 by 36, **Fig. 2**.

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

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

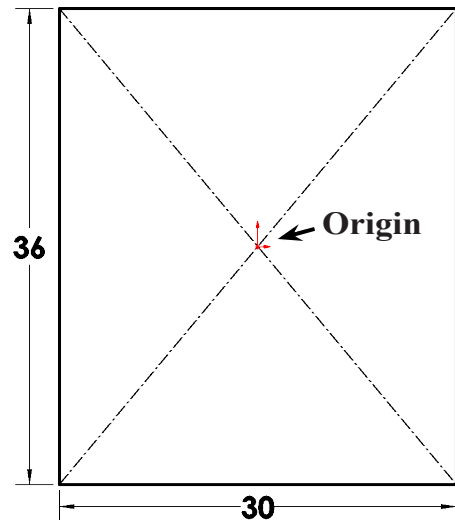


Fig. 2

Step 9. In the Boss-Extrude Property Manager set:
under Direction 1, **Fig. 3**
End Condition **Blind**

Depth  **2.4**
click OK .

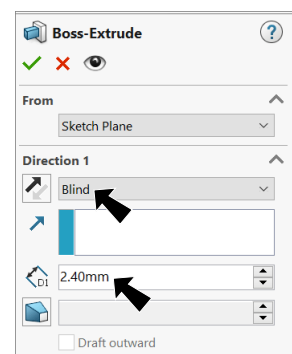


Fig. 3

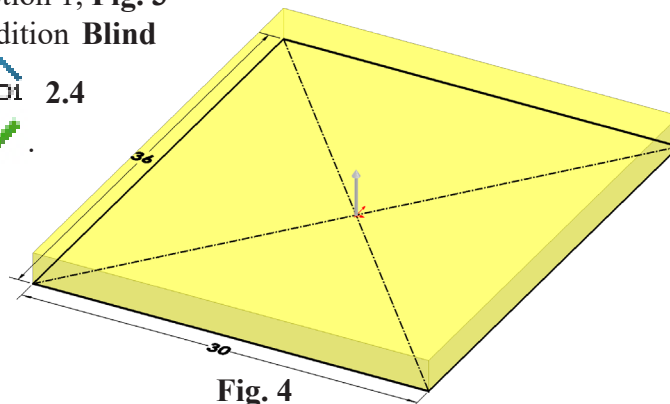


Fig. 4

B. Save as "SOLAR PANEL 30 x 36".

Step 1. Click File Menu > Save As.

Step 2. Key-in SOLAR PANEL 30 x 36 for the filename and press ENTER.

C. Fillet.

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

Step 2. In the Fillet Property Manager set:
select **Manual**, **Fig. 5**
under Fillet Type

select **Constant Size Fillet** 
under Fillet Parameters
Fillet Method **Asymmetric**

Distance 1  **1.7**

Distance 2  **3.4**

under Items To Fillet

click **top edges (4)**, **Fig. 6**

click OK .

Step 3. Save  (Ctrl-S).

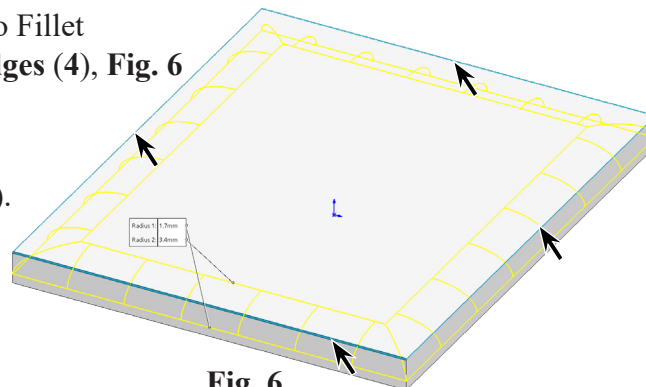


Fig. 6

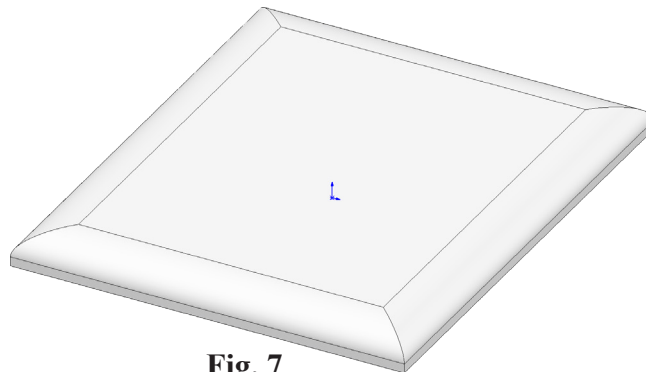


Fig. 7

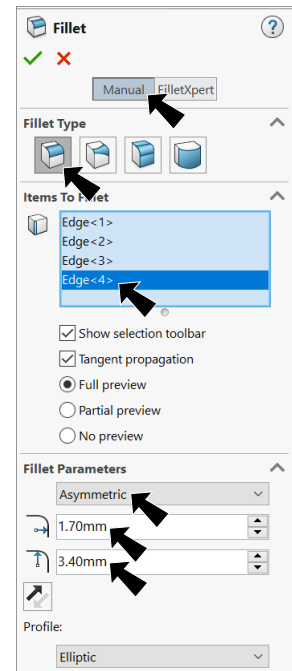


Fig. 5

D. Appearance: Plastic Dark Gray.

Step 1. Click the part, click **Appearances**

Callout  on the context toolbar and click **SOLAR PANEL** , Fig. 8.

Step 2. In the Appearances Task pane, expand **Plastic**, click **Medium Gloss** and in the lower pane select **dark grey medium gloss plastic**, Fig. 9.

Step 3. Click OK  in the Appearances Property Manager, Fig. 10.

Step 4. Save  (Ctrl-S).

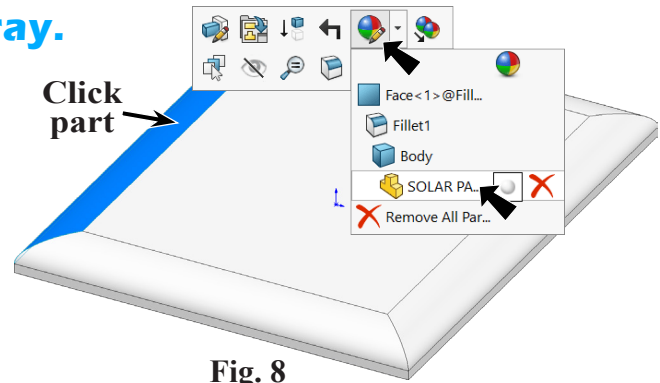


Fig. 8

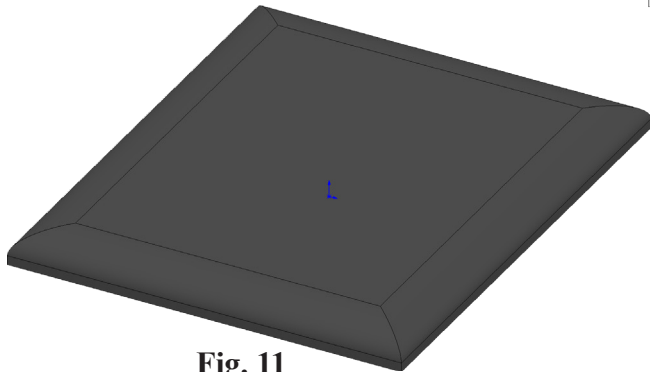


Fig. 11

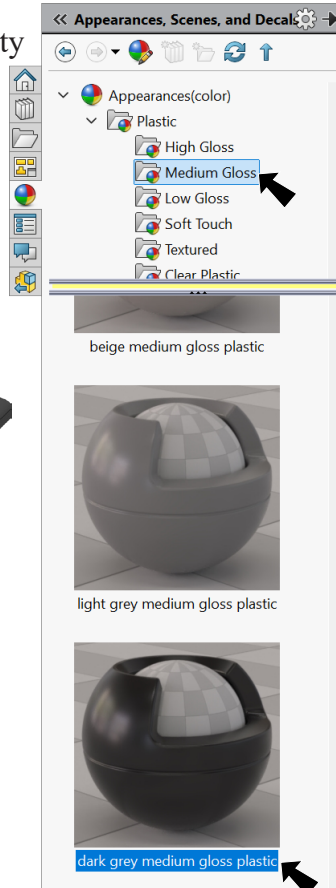


Fig. 9

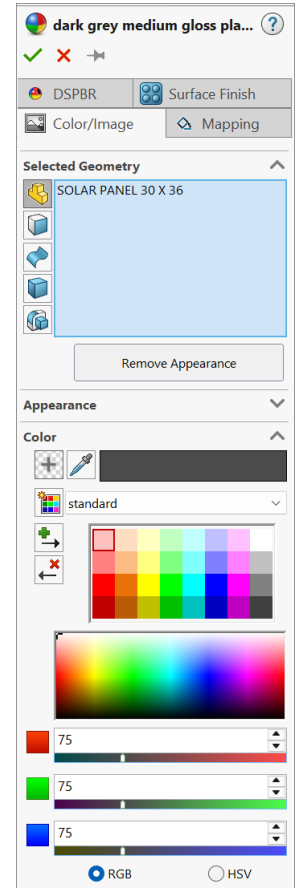


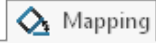
Fig. 10

E. Decal.

Step 1. In the Feature Manager click the **Display Manager** tab  and click **View Decals** . Right click in the Display Manager and click **Add Decals**, Fig. 12.

Step 2. In the Decals Property Manager Image tab:
under Decal Preview
click **Browse** and **My Documents** buttons
open **solar-panel-30x36.jpg** Fig. 13
[Download decal here.](#)

under Mask Image
select **No mask**

Step 3. Click **Mapping** tab  at the top of the Decals Manager, Fig. 14
under Selected Geometry

unselect all except Select Faces
click **top face**, Fig. 15

under Mapping
Mapping type **Projection**

Projection direction 
Selected Reference

under Size/Orientation
check **Fit width to selection**
check **Fit height to selection**
click OK .

Step 4. Save  (Ctrl-S).

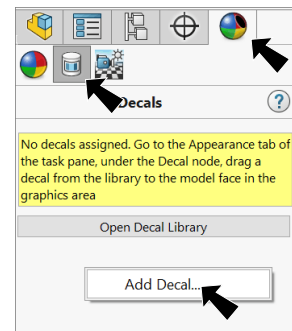


Fig. 12

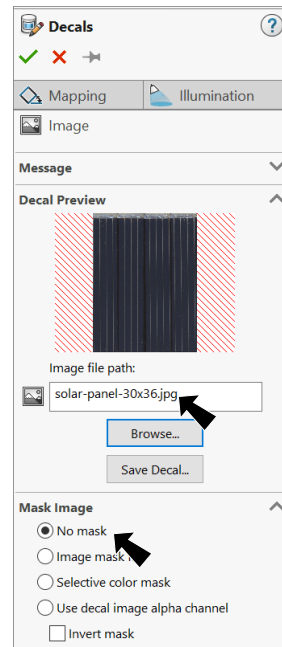


Fig. 13

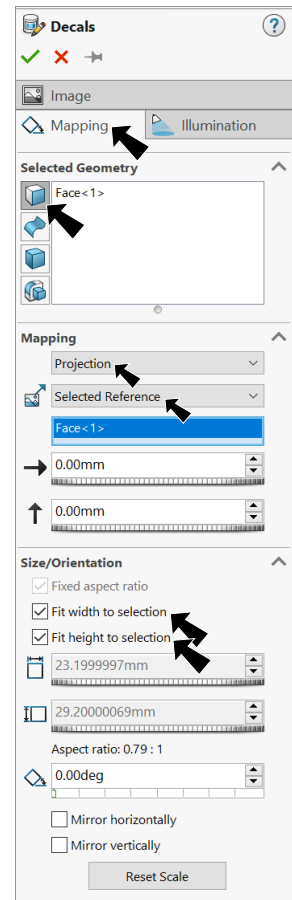


Fig. 14

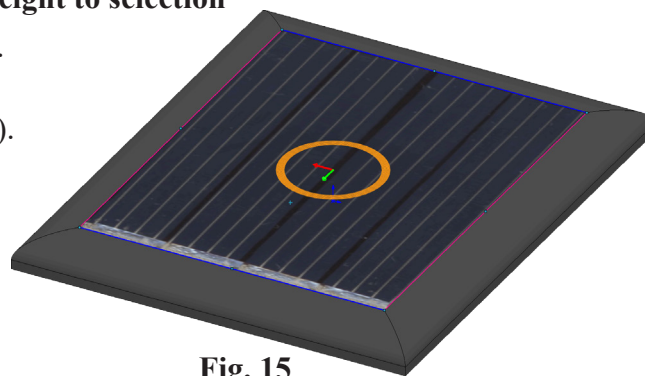


Fig. 15