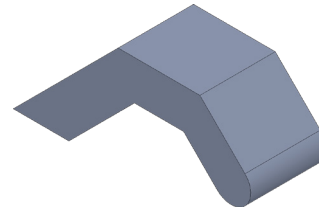




Chapter 15

Solar Train Wire Run



A. Extrude.

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

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

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

Step 4. Sketch a right-angled trapezoid from the Origin  **Fig. 2**. Before moving cursor ways from vertical at line at **Origin**  click **Construction Geometry**  on context toolbar.

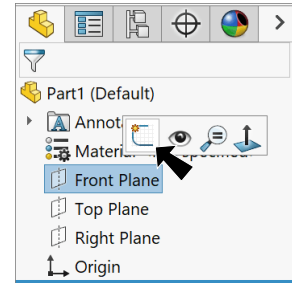


Fig. 1

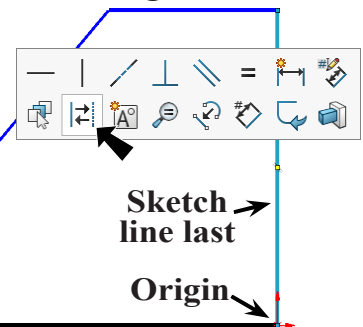
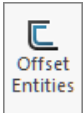


Fig. 2

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

Step 6. Add dimensions, **Fig. 3**.

Step 7. Click **Offset Entities**  on the Sketch toolbar.

Step 8. In the Offset Entities Property Manager set: under Parameters, **Fig. 4**

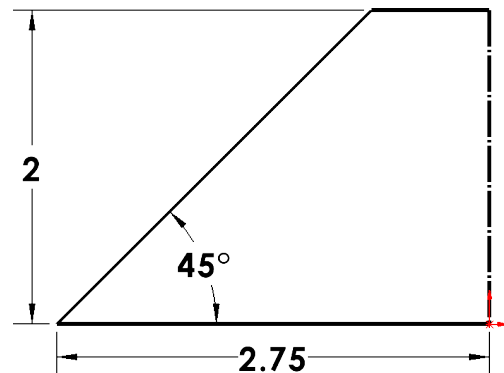


Fig. 3

Distance  **1.2**
check **Reverse**
uncheck **Select chain**
uncheck **Bi-directional**
click **top and angled lines**,
Fig. 5
Yellow offset on outside
click OK .

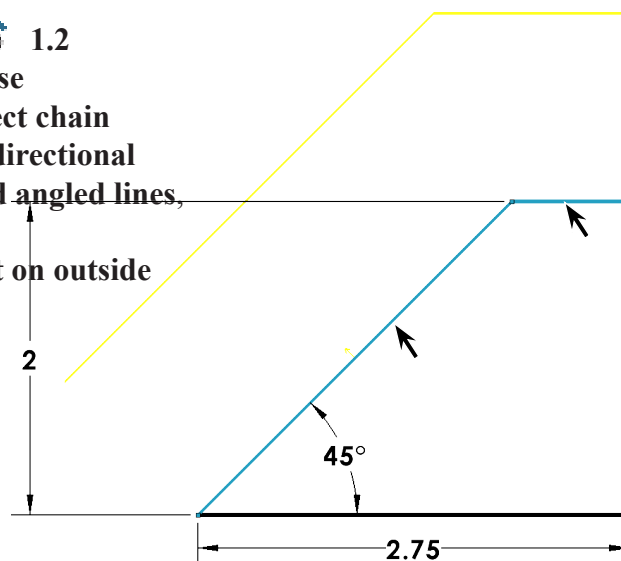


Fig. 5

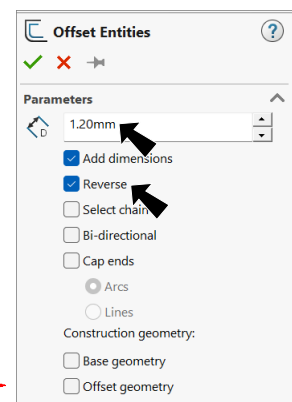
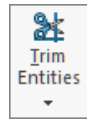


Fig. 4

Step 9. Click **Trim Entities** (S) on the Sketch toolbar.



Step 10. In the Trim Property Manger:

select **Corner**, Fig. 6



Extend outside angled line and bottom line to close sketch, Fig. 7.
Results shown in Fig. 8.

Click OK  when done.

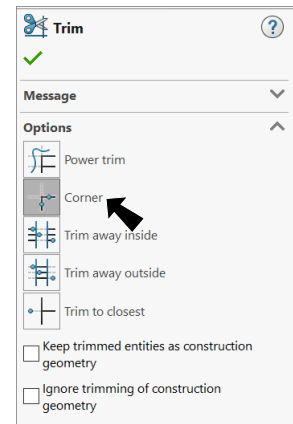


Fig. 6

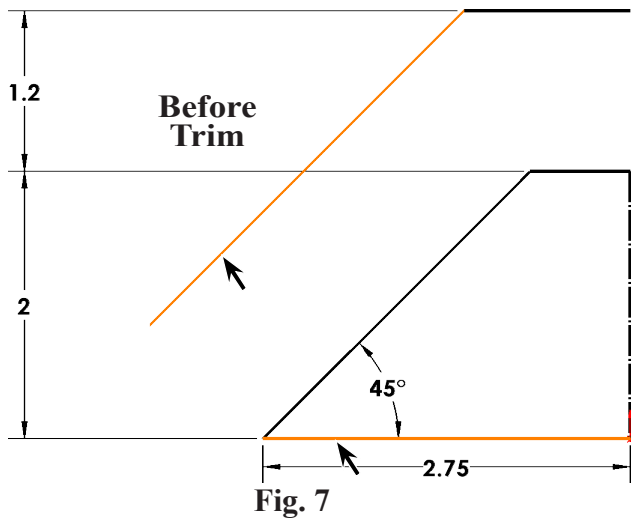


Fig. 7

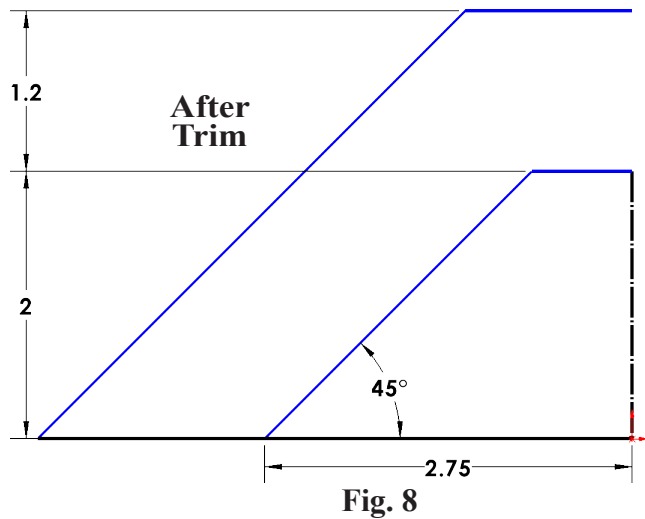


Fig. 8

Step 11. **Ctrl click bottom endpoint of inside angled line and bottom line** to select both. Release Ctrl key and click **Make Coincident**  on the context toolbar, Fig. 9.

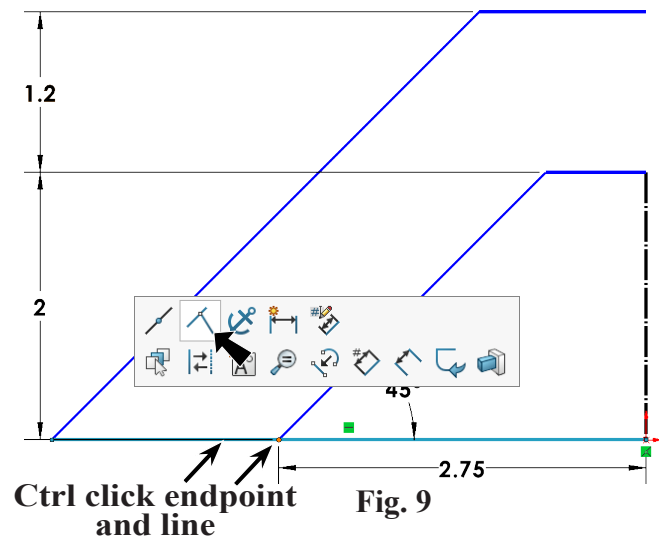


Fig. 9

Step 12. Drag a selection to **select all geometry**, **Fig. 10**.

Step 13. Click **Mirror Entities**  on the Sketch toolbar.

Step 14. Click **Perimeter Circle**  (S) in the **Circle** flyout  on the Sketch toolbar.

Step 15. Sketch a perimeter circle at **mirrored lines**, **Fig. 11**.

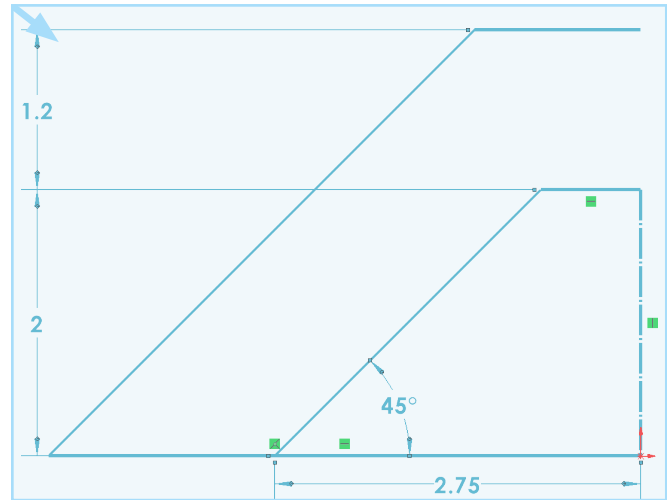


Fig. 10

Step 16. Click **Smart Dimension**  (S) on the Sketch toolbar.

Step 17. Add dimension, **Fig. 12**.

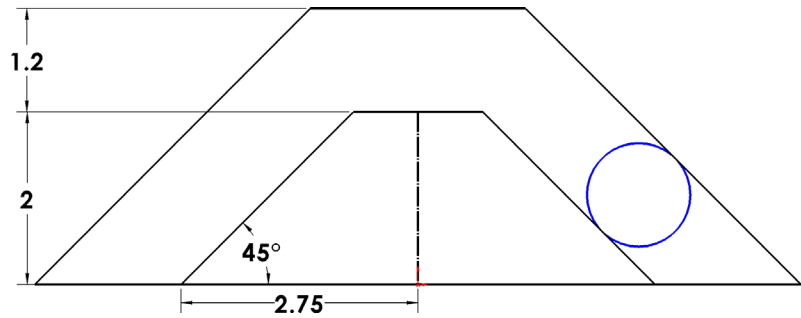
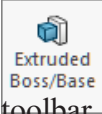


Fig. 11

Step 18. Click **Features**  on the Command Manager toolbar.

Step 19. Click **Extruded Boss/Base**  on the Features toolbar.

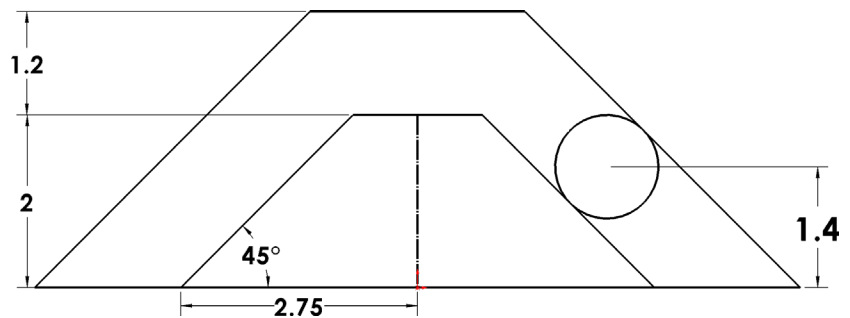


Fig. 12

Step 20. In the Boss-Extrude Property Manager set:
under Direction 1, **Fig. 13**
End Condition **Mid Plane**

Depth  **2.3**
under Selected Contours
click the **two contours**, **Fig. 14**
click OK .

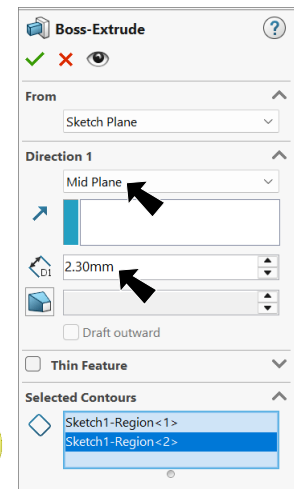


Fig. 13

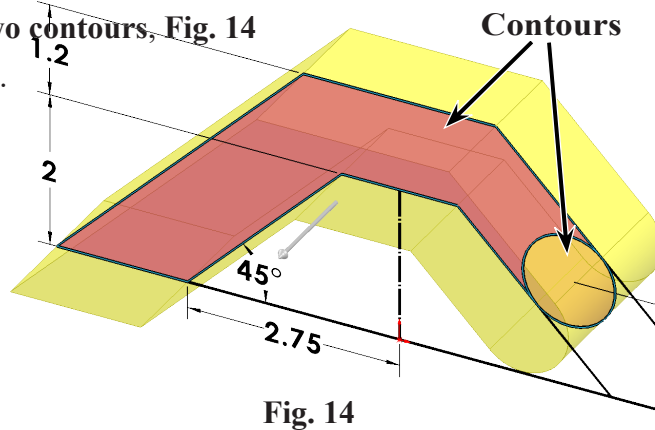


Fig. 14

B. Save as "WIRE RUN".

Step 1. Click File Menu > Save As.

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

C. Appearance: Blue Plastic.

Step 1. Click part, click **Appearance Callout** on the context toolbar and click **WIRE RUN**, Fig. 15.

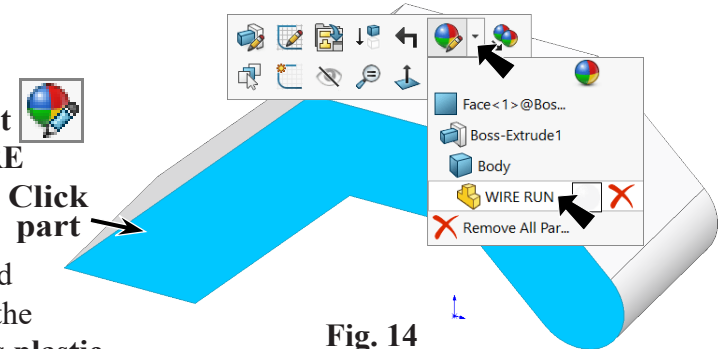


Fig. 14

Step 2. In the Appearances Task pane, expand **Plastic**, click **Medium Gloss** and in the lower pane select **blue medium gloss plastic**, Fig. 16.

Step 3. Over in Appearances Property Manager, under Color, Fig. 17
set **RGB values**
R 132
G 142
B 165
and OK.

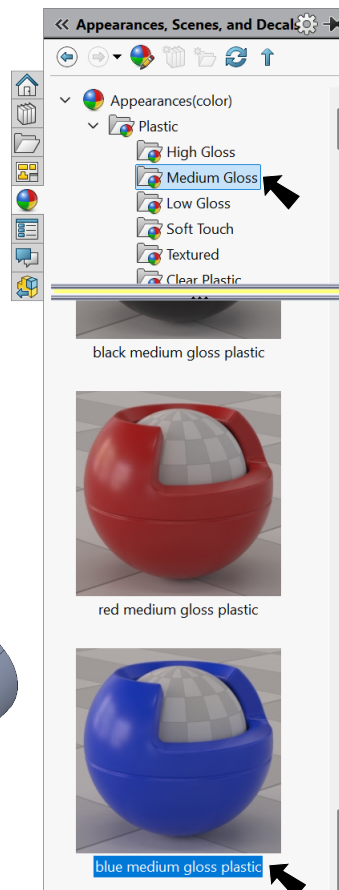


Fig. 16

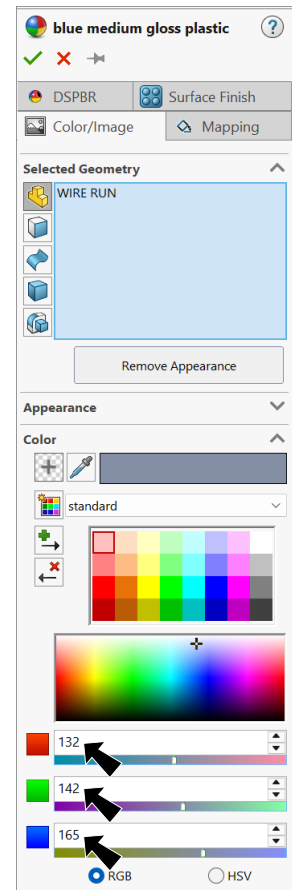


Fig. 17

Step 4. Save (Ctrl-S).

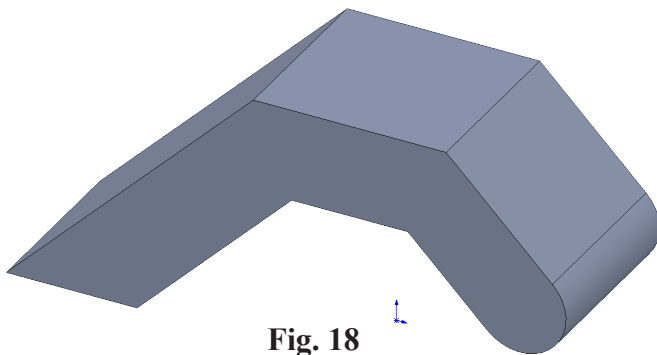


Fig. 18