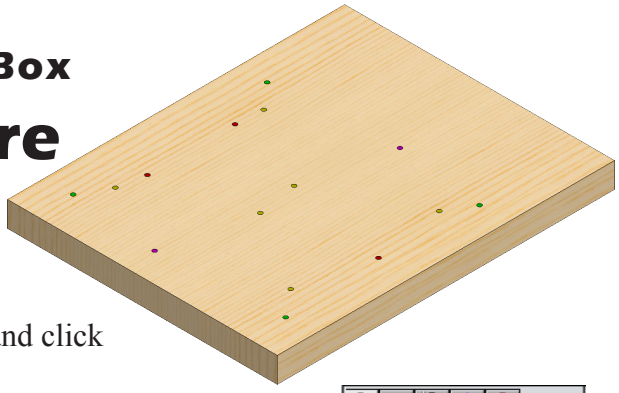
Chapter 1

Jewelry Box
Fixture



A. Fixture Sketch.

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

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

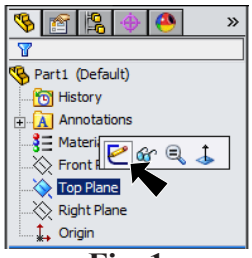


Fig. 1

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

Step 4. Draw a rectangle starting at the Origin , **Fig. 2**.

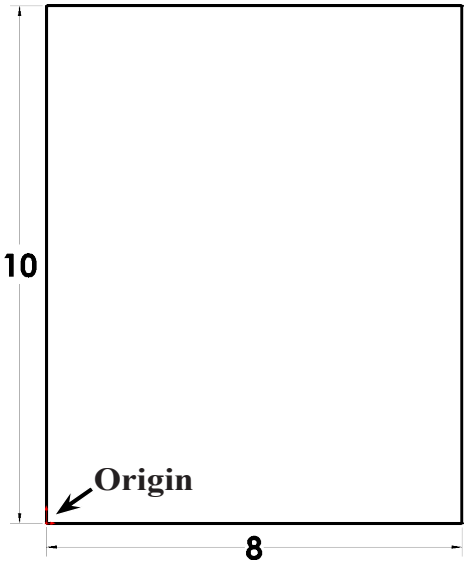


Fig. 2

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

Step 6. Dimension rectangle **8 by 10**, **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. 3**

Depth **.75**

click **Reverse direction**

The **Direction arrow** should point **down**, **Fig. 4**.
This will position Origin on **top** corner of stock.

Click OK .

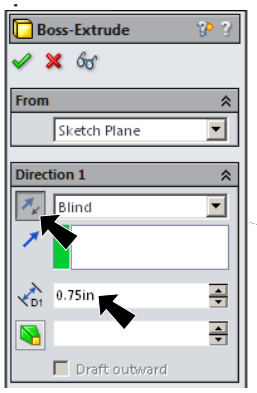


Fig. 3

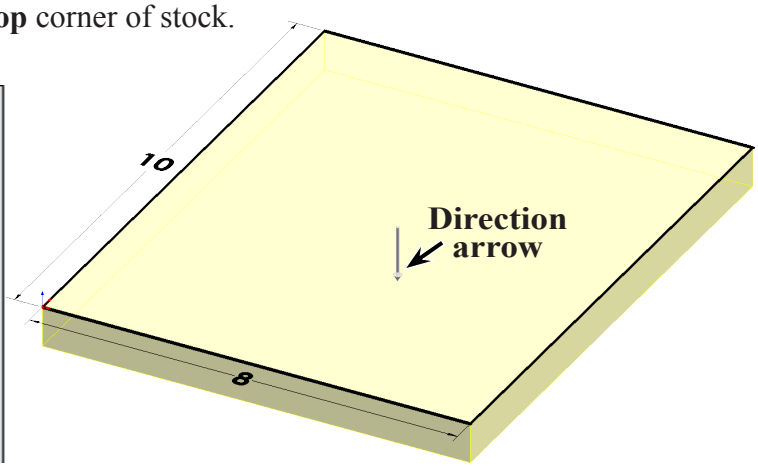


Fig. 4

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B. Save as "FIXTURE".

Step 1. Click File Menu > Save As.

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

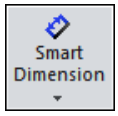
C. Bottom Pocket.

Step 1. Click **Bottom** on the Standard Views toolbar (**Ctrl-6**).

Step 2. Click the **bottom face** and click **Sketch** on the Context toolbar, **Fig. 5**.

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

Step 4. Draw a rectangle, **Fig. 6**.

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

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

Step 7. Rotate view to view **bottom pocket cut**, hold down middle mouse button (wheel) and drag to rotate view, **Fig. 8**.

Step 8. Click **Features** on the Command Manager toolbar.

Step 9. Click **Extruded Cut** on the Features toolbar.

Step 10. In the Cut-Extrude Property Manager set:
under Direction 1, **Fig. 7**

Depth **.15**

The **Direction arrow** should point **down**, **Fig. 8**

Click OK .

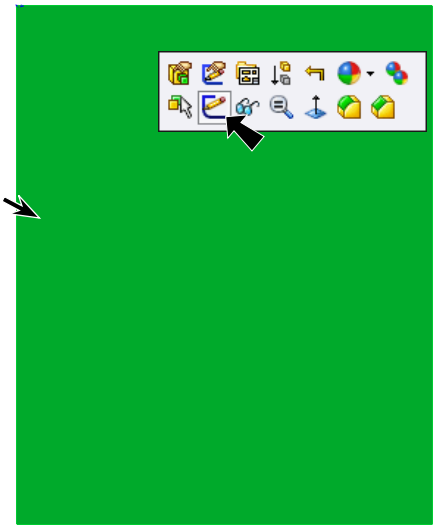


Fig. 5

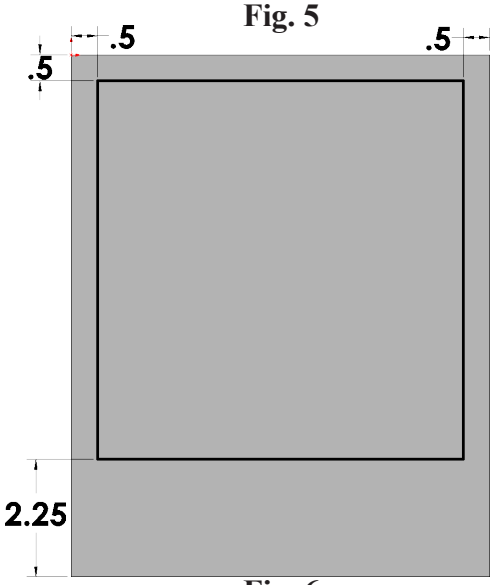


Fig. 6

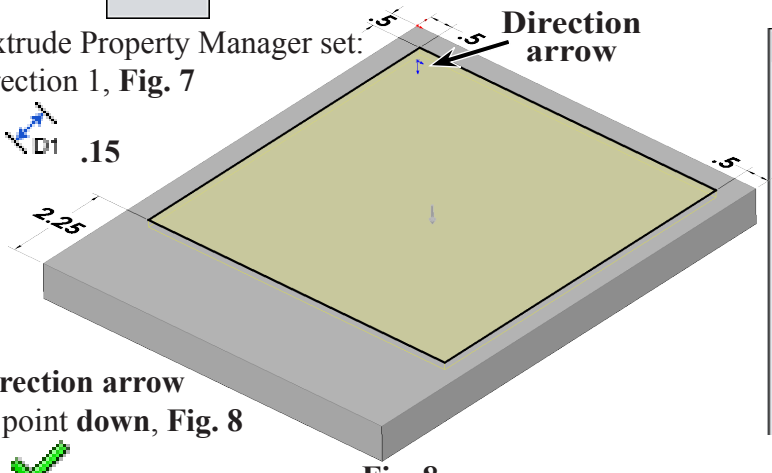


Fig. 8

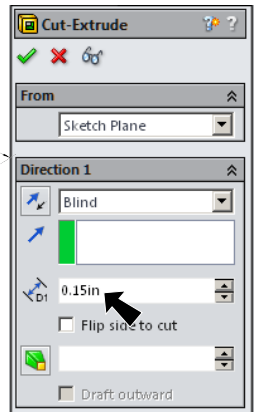


Fig. 7

D. Stock Holes (Green).

Step 1. Click **Top** on the Standard Views toolbar. (**Ctrl-5**)

Step 2. Click **Hole Wizard** Hole Wizard on the Features toolbar.

Step 3. In the Property Manager set:
under Hole Type, **Fig. 9**
click **Hole**
under Standard:
select **ANSI Inch**
under Type:
select **Fractional Drill Sizes**
under Hole Specification:
Size: 1/8
End Condition **Through All**

click **Positions tab** Positions at top of the Property Manager.

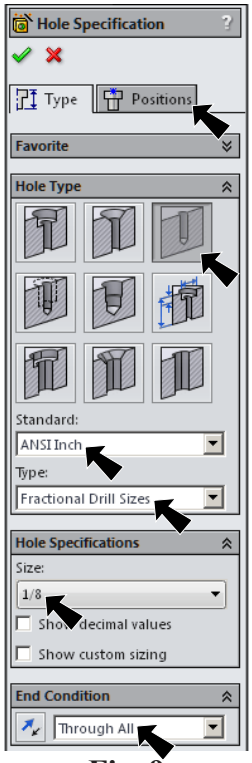


Fig. 9

Step 4. Click **top face** one time as face for holes, **Fig. 10**.

Step 5. Click to place **two Points**, **Fig. 10**.

Step 6. **Right click drawing and click Select** from menu to unselect Smart Dimension.

Step 7. **Ctrl click the 2 Points** to select both. Release Ctrl key and click **Make Vertical** on the Context toolbar, **Fig. 11**.

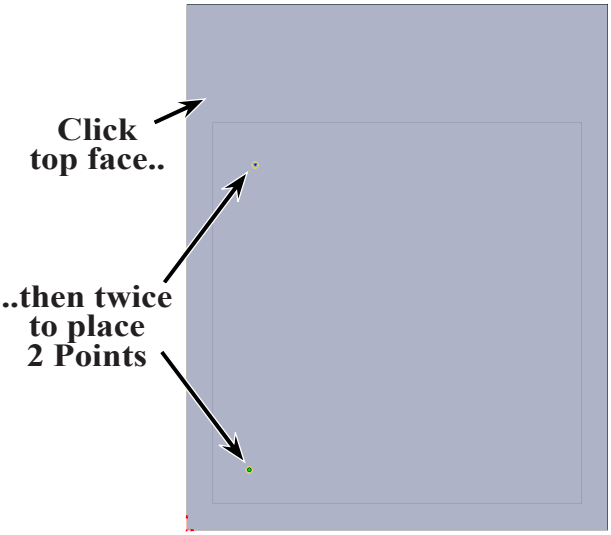


Fig. 10

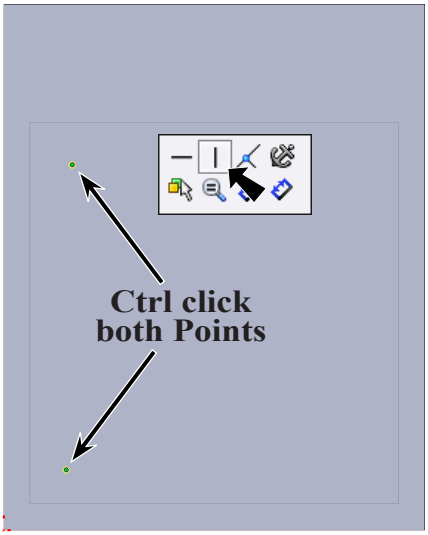
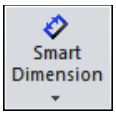


Fig. 11

Step 8. Click **Smart Dimension** 

(S) on the Sketch toolbar.

Step 9. Add dimensions, **Fig. 12**.

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

Step 11. Start at **Midpoint** **of bottom edge** draw centerline up, **Fig. 13**.

Step 12. **Right click graphics area and click Select** from menu to unselect Centerline.

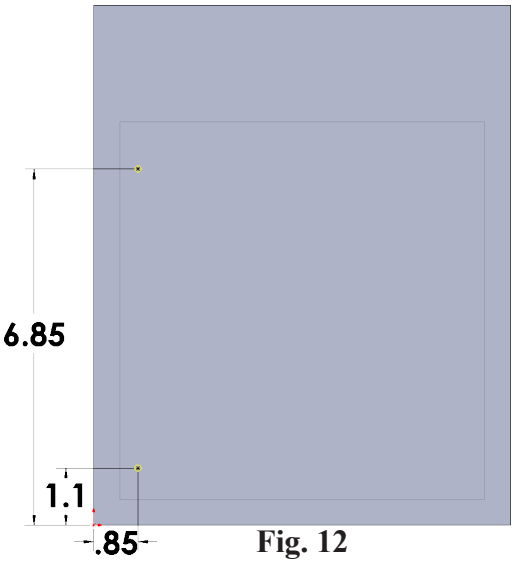
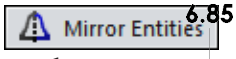


Fig. 12

Step 13. Drag a selection to select all geometry, **Fig. 14**.

Step 14. Click **Mirror Entities** 

on the Sketch toolbar, **Fig. 15**.

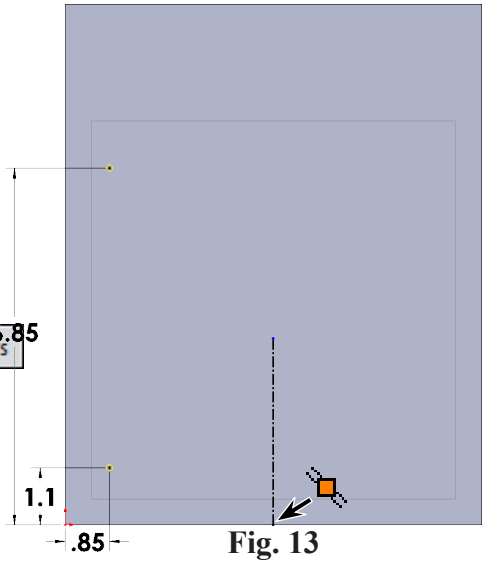


Fig. 13

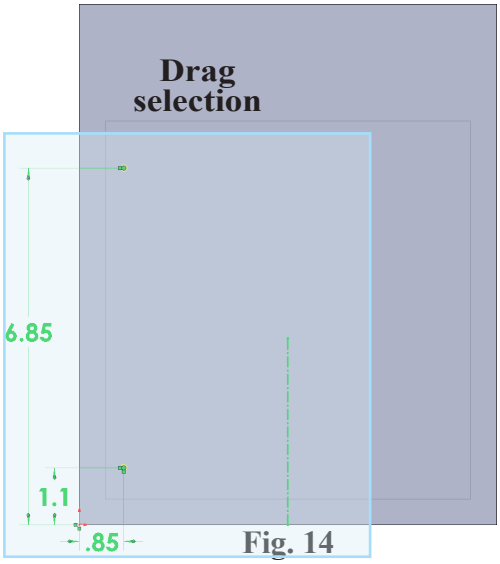


Fig. 14

Step 15. Click OK in Hole Property Manager.

Step 16. Save. Use **Ctrl-S**.

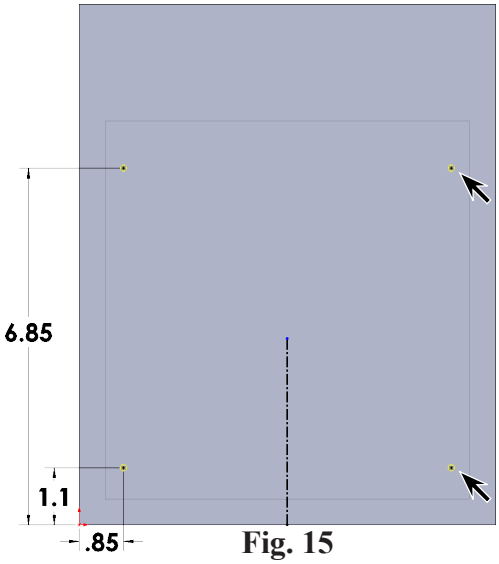


Fig. 15

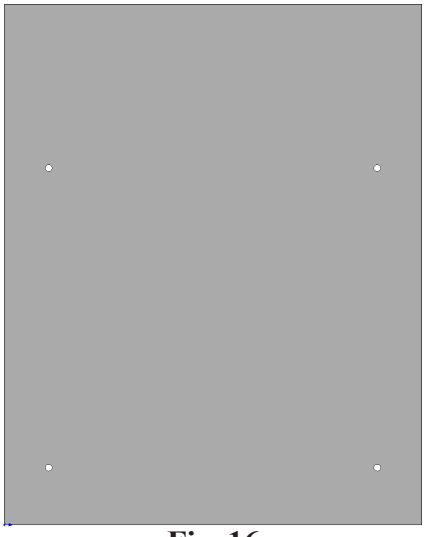


Fig. 16

E. Appearance Green.

Step 1. Click **Isometric** on the View toolbar. (**Ctrl-7**)

Step 2. Click **Hole Wizard** feature in the Feature Manager and click **Appearance Callout** on the Context toolbar, then click **1/8 Dia...**, **Fig. 17**.

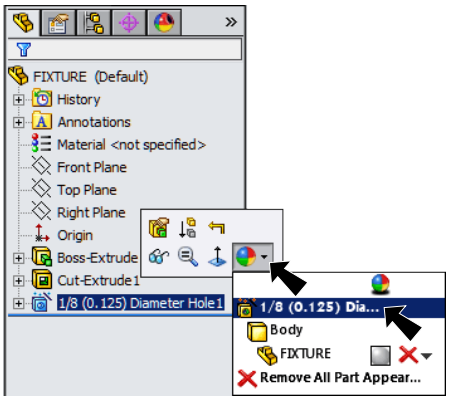


Fig. 17

Step 3. In the Appearances Property Manager,
under Color:
click **green** swatch, **Fig. 18**
click OK .

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

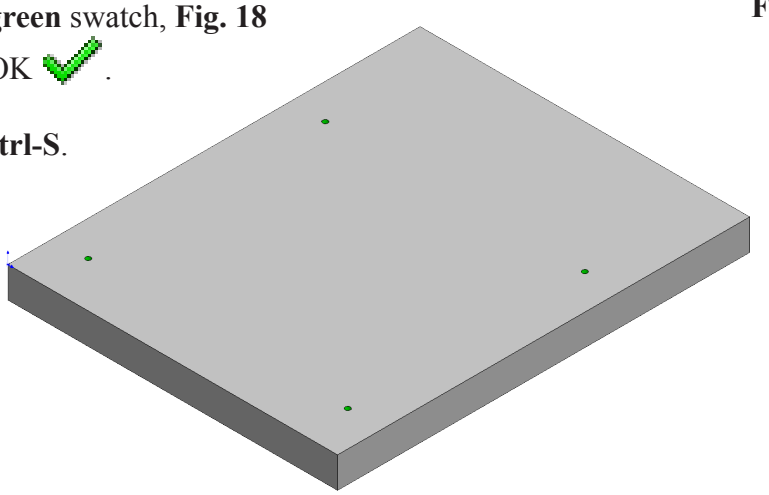


Fig. 19

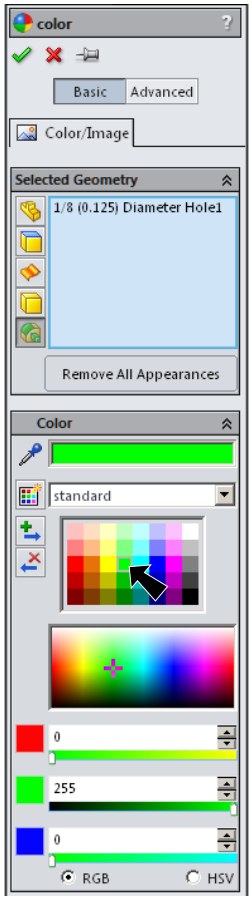


Fig. 18

F. Base Holes (Red).

Step 1. Click **Top** on the Standard Views toolbar. (**Ctrl-5**)

Step 2. Click **Hole Wizard** Hole Wizard on the Features toolbar.

Step 3. In the Property Manager set:
under Hole Type, **Fig. 20**
click **Hole**
under Standard:
select **ANSI Inch**
under Type:
select **Fractional Drill Sizes**
under Hole Specification:
Size: 1/8
End Condition **Through All**

click **Positions tab** Positions at top of the Property Manager.

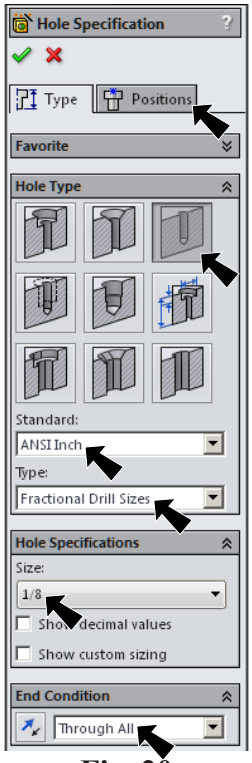


Fig. 20

Step 4. Click **top face** one time as face for holes, **Fig. 21**.

Step 5. Click to place **3 Points**, **Fig. 21**.

Step 6. **Right click drawing and click Select** from menu to unselect Smart Dimension.

Step 7. **Ctrl click the two side Points** to select both. Release Ctrl key and click **Make Vertical** on the Context toolbar, **Fig. 22**.

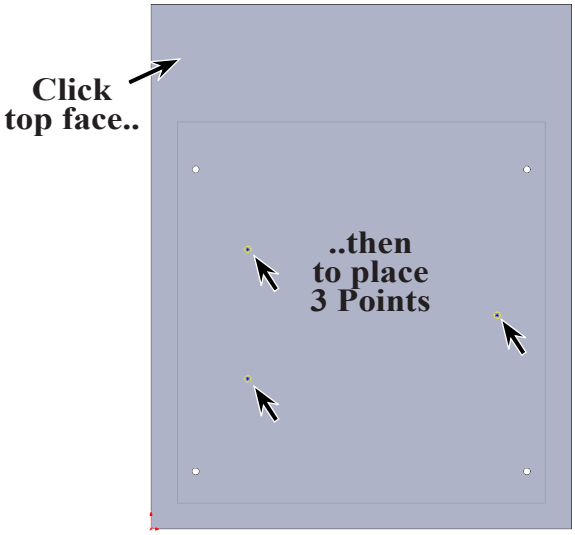


Fig. 21

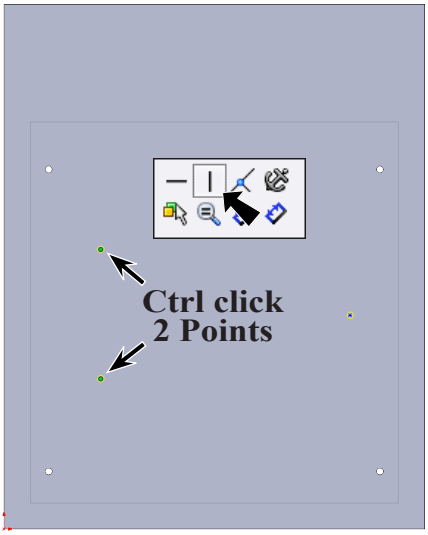
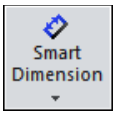


Fig. 22

Step 8. Click **Smart Dimension** 

(**S**) on the Sketch toolbar.

Step 9. Add dimensions, **Fig. 23**.

Step 10. Click OK in Hole Property Manager.

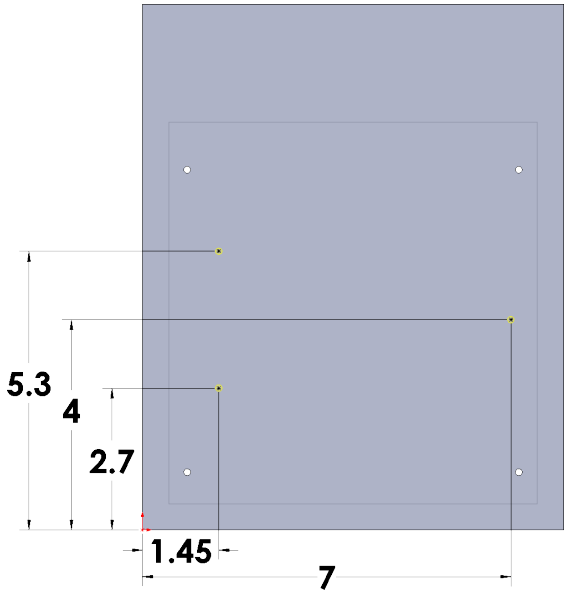


Fig. 23

G. Appearance Red.

Step 1. Click **Isometric** on the View toolbar. (**Ctrl-7**)

Step 2. Click **Hole Wizard** **Hole2** feature in the Feature Manager and click **Appearance Call-out** on the Context toolbar, then click **1/8 Hole** , **Fig. 24**.

Step 3. In the Appearances Property Manager,
under Color:
click **red** swatch, **Fig. 25**
click OK .

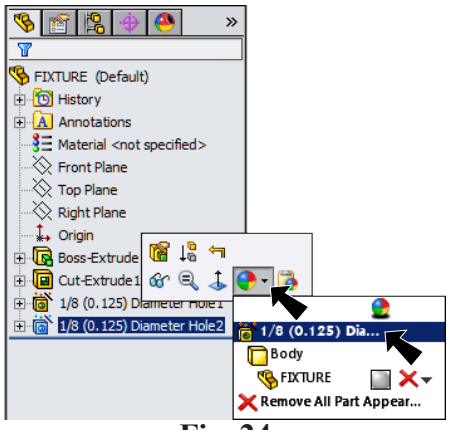


Fig. 24

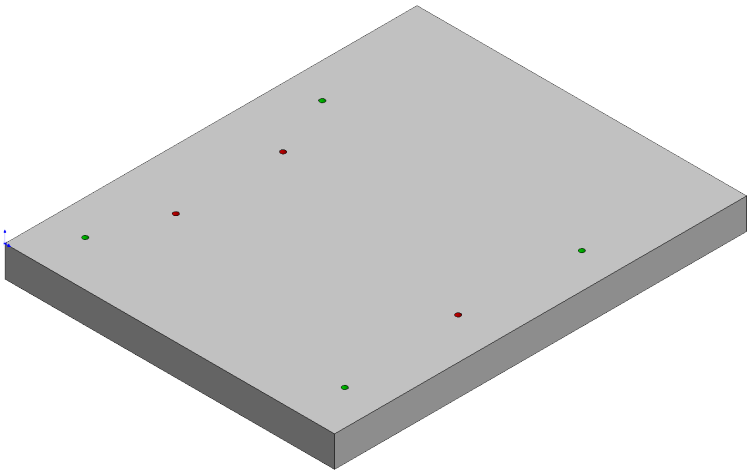


Fig. 26

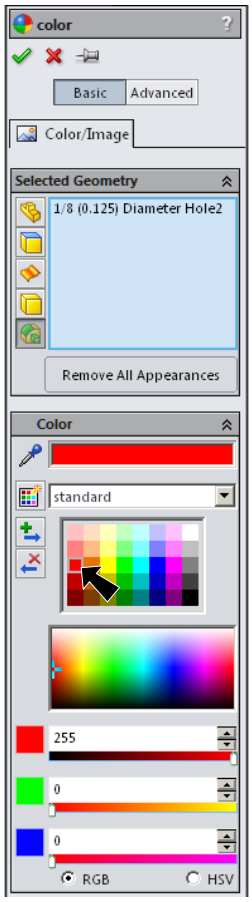


Fig. 25

H. Lid/Tray Holes (Yellow).

Step 1. Click **Top** on the Standard Views toolbar. (**Ctrl-5**)

Step 2. Click **Hole Wizard** Hole Wizard on the Features toolbar.

Step 3. In the Property Manager set:
under Hole Type, **Fig. 27**
click **Hole**
under Standard:
select **ANSI Inch**
under Type:
select **Fractional Drill Sizes**
under Hole Specification:
Size: 1/8
End Condition **Through All**

click **Positions tab** Positions.

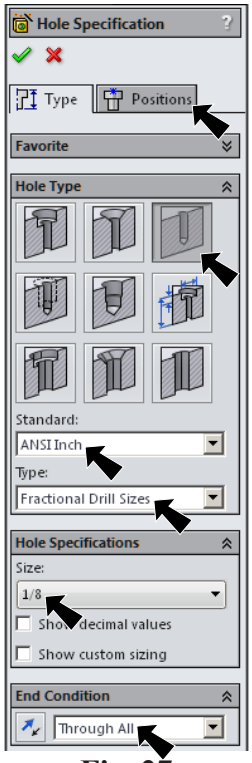


Fig. 27

Step 4. Click **bottom face** one time as face for holes and click to place **6 Points**, **Fig. 28**.

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

Step 6. Add dimensions, **Fig. 29** and click OK in Hole Property Manager.

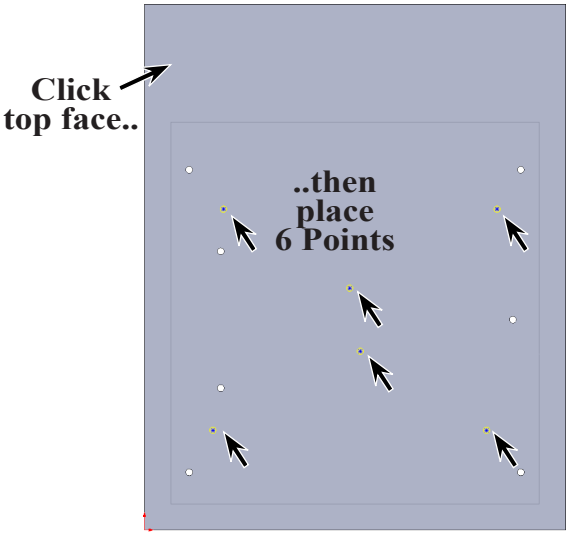


Fig. 28

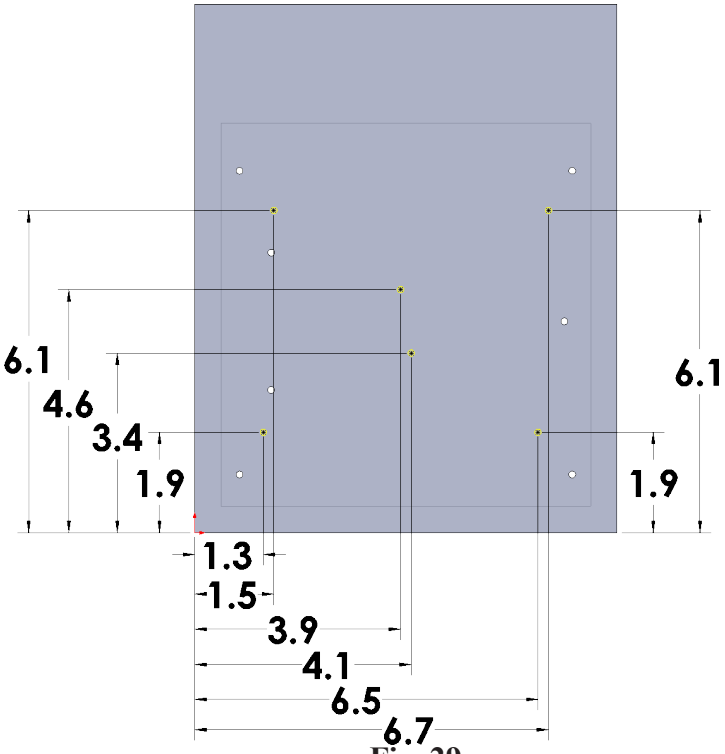


Fig. 29

I. Appearance Yellow.

Step 1. Click **Isometric** on the View toolbar. (**Ctrl-7**)

Step 2. Click **Hole Wizard** **Hole3** feature in the Feature Manager and click **Appearance Callout** on the Context toolbar, then click **1/8 Hole**, **Fig. 30**.

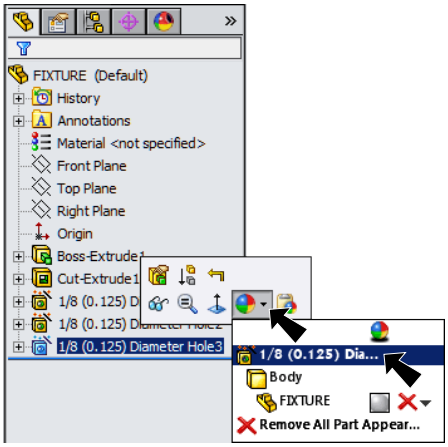


Fig. 30

Step 3. In the Appearances Property Manager,

under Color:

click **yellow** swatch, **Fig. 31**

click OK .

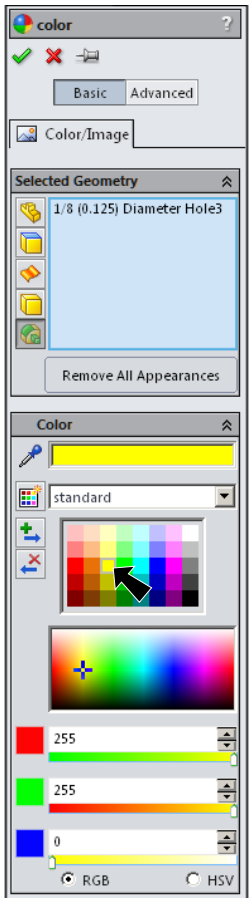


Fig. 31

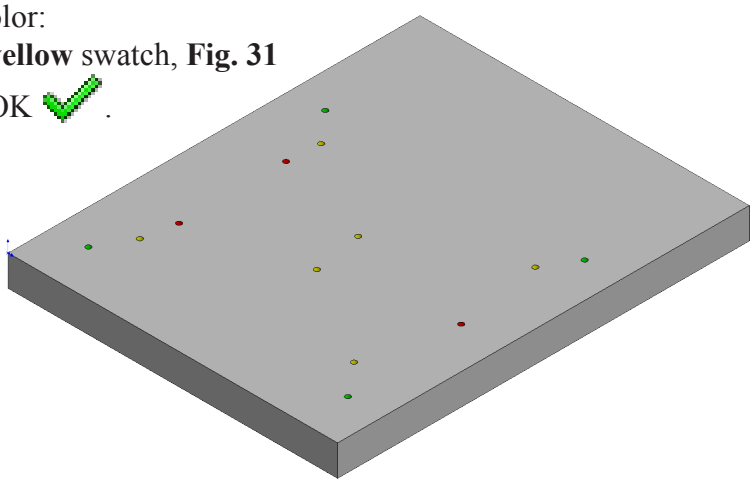
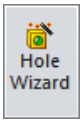


Fig. 32

J. Pin Holes (Magenta).

Step 1. Click **Top** on the Standard Views toolbar. (**Ctrl-5**)

Step 2. Click **Hole Wizard** 

on the Features toolbar.

Step 3. In the Property Manager set:
under Hole Type, **Fig. 33**
click **Hole**
under Standard:
select **ANSI Inch**
under Type:
select **Fractional Drill Sizes**
under Hole Specification:
Size: 1/8
End Condition **Blind**
Blind Depth Hole **.375**

click **Positions tab**

.

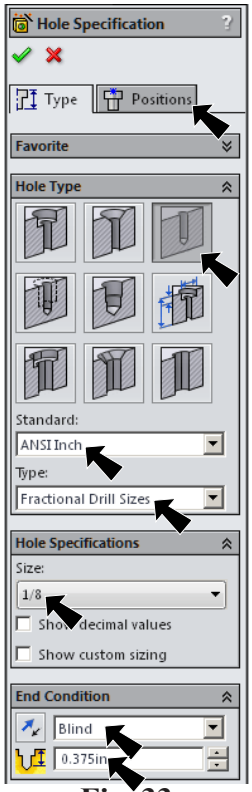
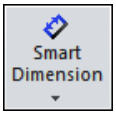


Fig. 33

Step 4. Click **bottom face** one time as face for holes and click to place **2 Points**, **Fig. 34**.

Step 7. Click **Smart Dimension** 

(**S**) on the Sketch toolbar.

Step 8. Add dimensions, **Fig. 35**.

Step 9. Click OK in Hole Property Manager.

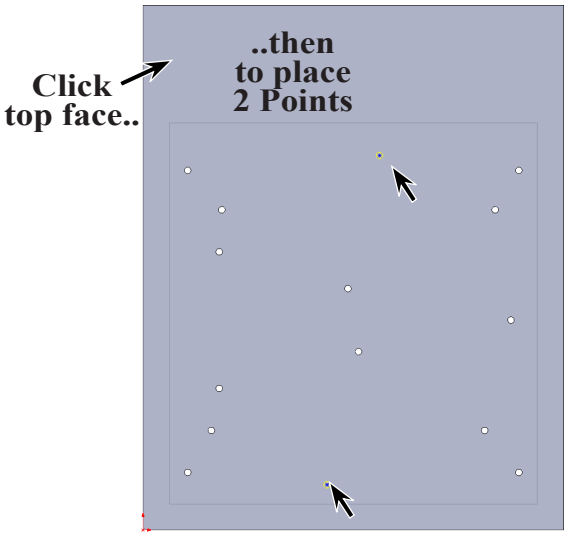


Fig. 34

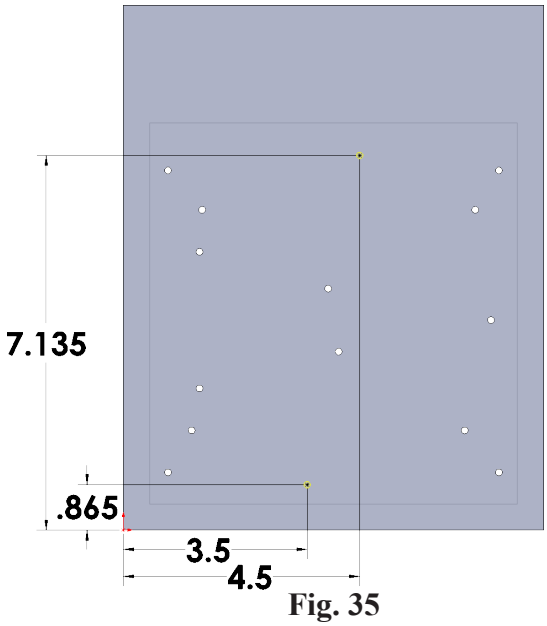


Fig. 35

K. Appearance Magenta.

Step 1. Click **Hole Wizard** **Hole 4** feature in the Feature Manager and click **Appearance Callout** on the Context toolbar then click **1/8 Hole** , **Fig. 36**.

Step 2. In the Appearances Property Manager,
under Color, **Fig. 37**
click **magenta** swatch
click OK .

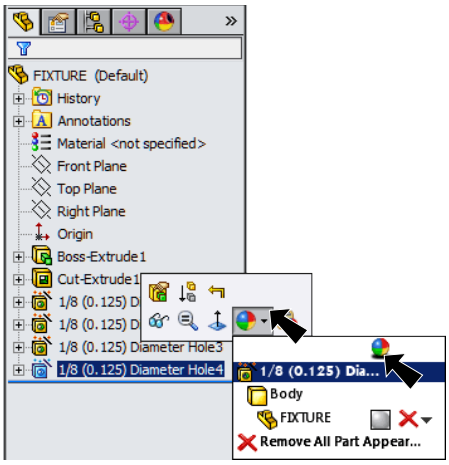


Fig. 36

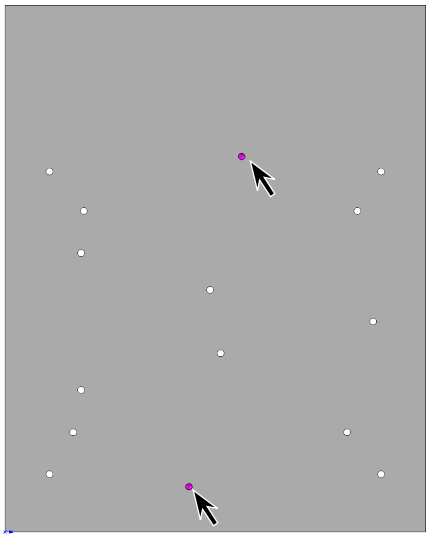


Fig. 38

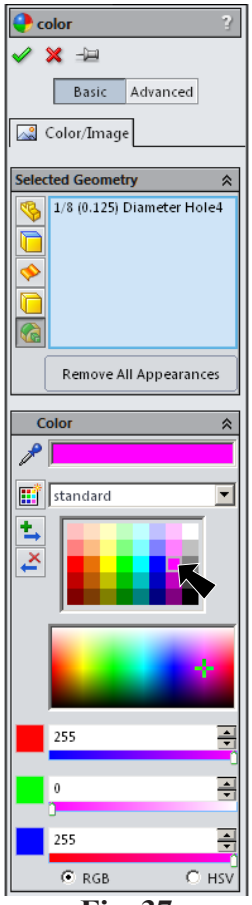


Fig. 37

L. Material Pine.

Step 1. Click **Isometric** on the View toolbar. (**Ctrl-7**)

Step 2. **Right click Material** in the Feature Manager and click **Edit Material**, **Fig. 39**.

Step 3. **Expand Woods** (click the +) in the material tree and click **Pine**, **Fig. 40**. Click **Apply** and **Close**, **Fig. 41**.

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

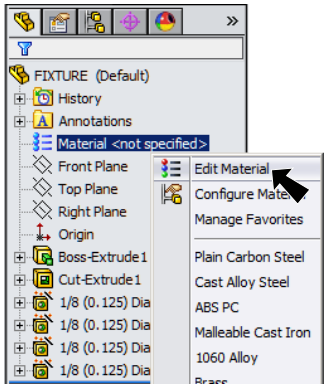


Fig. 39

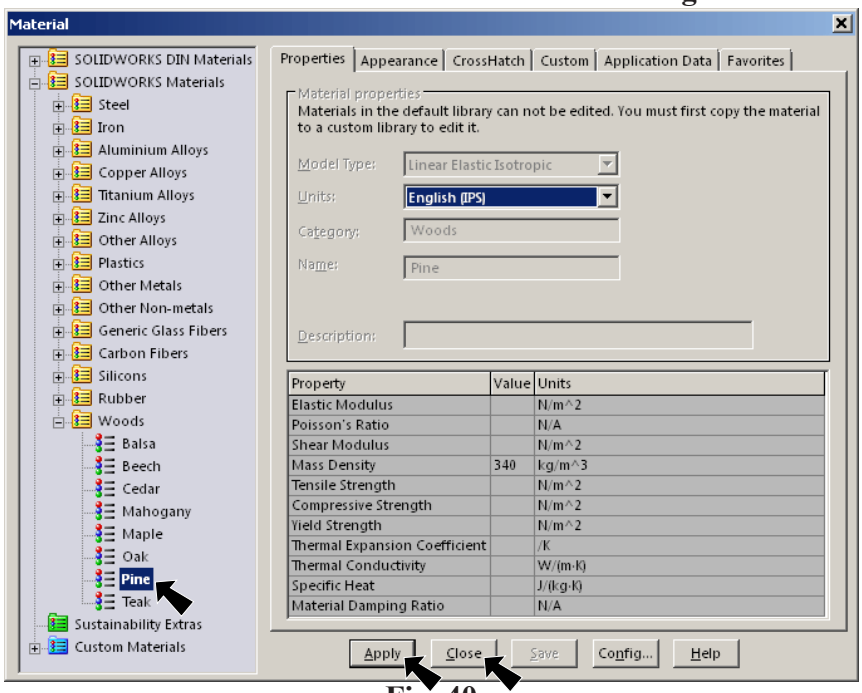


Fig. 40

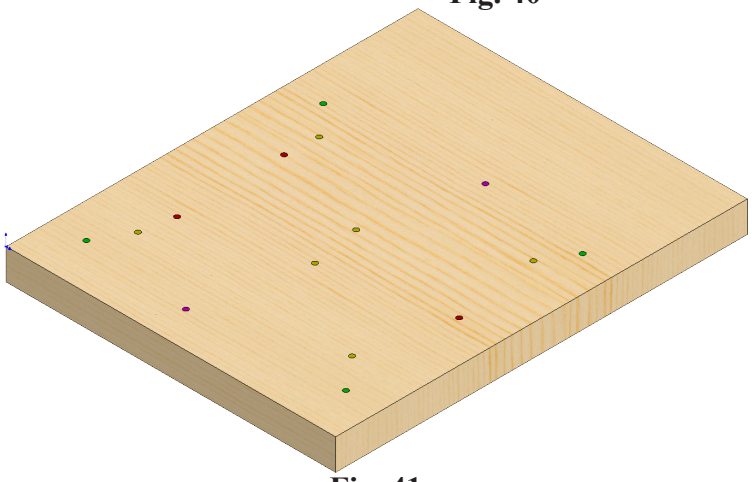


Fig. 41

M. Enable PhotoView 360.

Step 1. If necessary, turn on PhotoView 360, click the **flyout of Options** on the Standard toolbar and click **Add-Ins**.

Step 2. In the dialog box find **PhotoView 360** and place a check in the check box under **Active Add-Ins** and **Start-Up**. Click OK, **Fig. 42**.

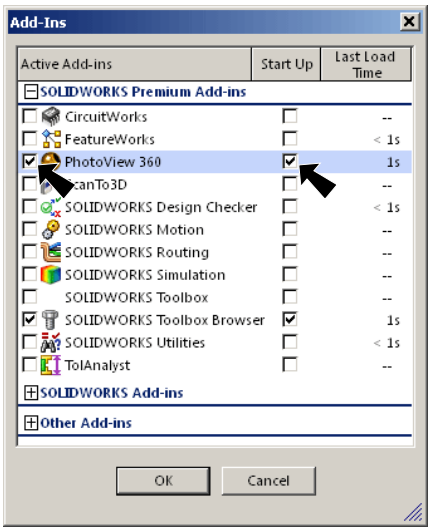


Fig. 42

N. Rotate Mapping.

Step 1. Click the Fixture to select the part, click **Appearances Callout** on the Content toolbar and click **FIXTURE**, **Fig. 43**.

Step 2. In the Property Manager:

click **Mapping tab** Mapping, **Fig. 44**

under Mapping Controls,

Rotation 90

click OK .

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

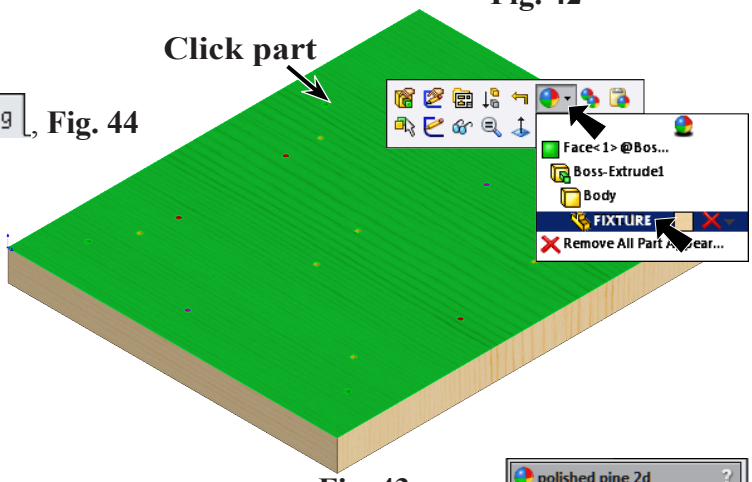


Fig. 43

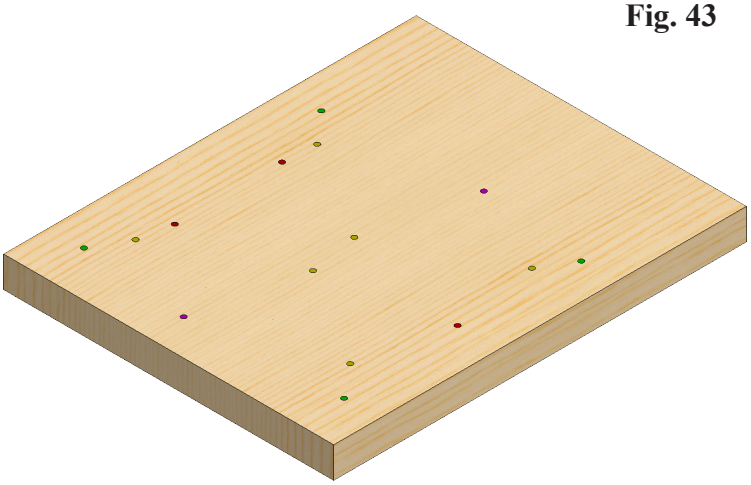


Fig. 45

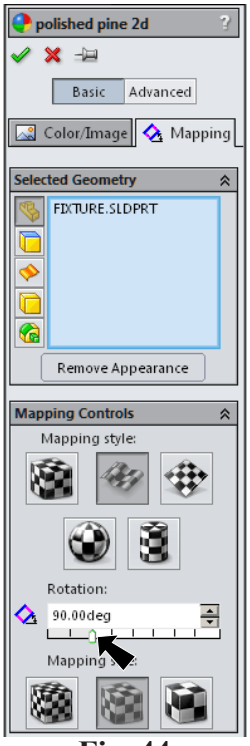


Fig. 44