





# Spinning Top Flywheel



## A. Extrude Circle.

- Step 1. Click File Menu > New, click **Part** and OK.
- Step 2. Click **Top Plane**  in the Feature Manager and click **Sketch**  on the context toolbar, **Fig. 1**.
- Step 3. Click **Circle**  (S) on the Sketch toolbar.
- Step 4. Sketch a circle starting at the Origin , **Fig. 2**.

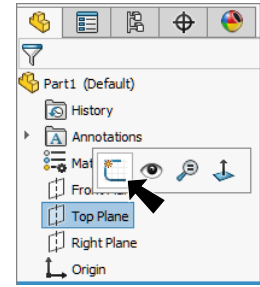



Fig. 1

- Step 5. Click **Smart Dimension**  (S) on the Sketch toolbar.
- Step 6. Dimension circle **diameter 3.5**, **Fig. 2**.

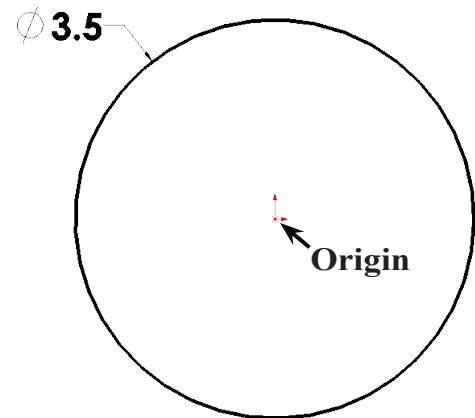



Fig. 2

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

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

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

Depth  **.75**  
click OK .

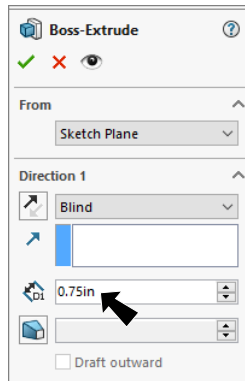


Fig. 3

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

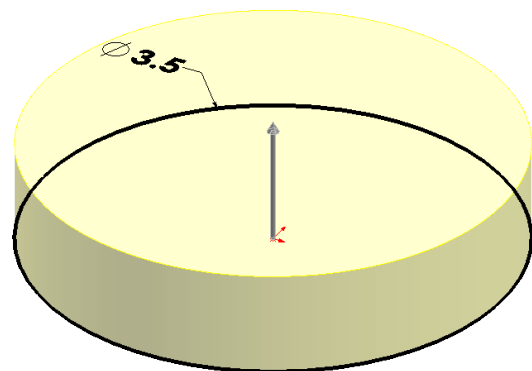


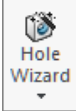
Fig. 4

## B. Save as "FLYWHEEL".

- Step 1. Click File Menu > Save As.
- Step 2. Key-in **FLYWHEEL** for the filename and press ENTER.

## C. Hole Wizard 1" Hole.

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

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

Step 3. In the Property Manager, on the Type tab set:  
under Hole Type, **Fig. 5**

click **Legacy Hole** 

under Type

select **Simple**

under End Condition

End Condition **Blind**

under Section dimensions

**Diameter Value 1**

**Depth Value .75/2** half way thru .75 stock or **.375**

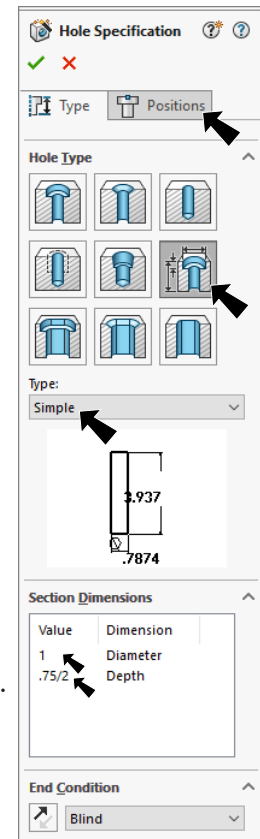
Step 4. Click **Positions** tab  at top of the Property Manager.

Step 5. Click **face** one time as face for hole and Origin  to place hole, **Fig. 6**.

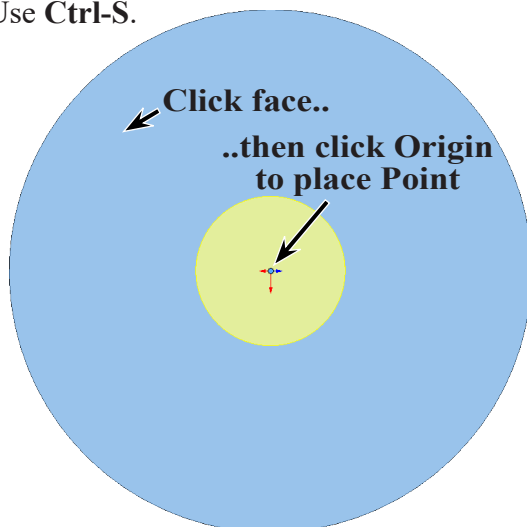
Step 6. Click OK  in the Hole Wizard Property Manager.

Step 7. You can rotate slightly to confirm hole depth. Use **down arrow key**.

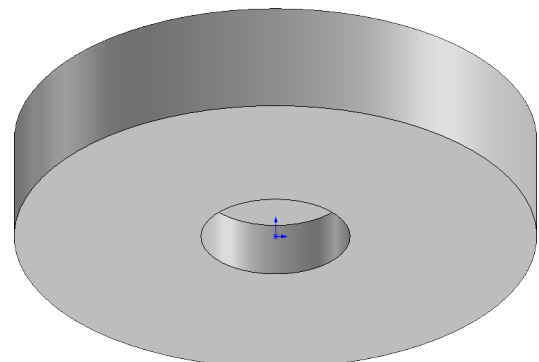
Step 8. Save. Use **Ctrl-S**.



**Fig. 5**



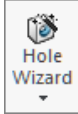
**Fig. 6**




**Fig. 7**

## D. Hole Wizard 3/8" Hole.


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, on the Type tab set:  
under Hole Type, **Fig. 8**

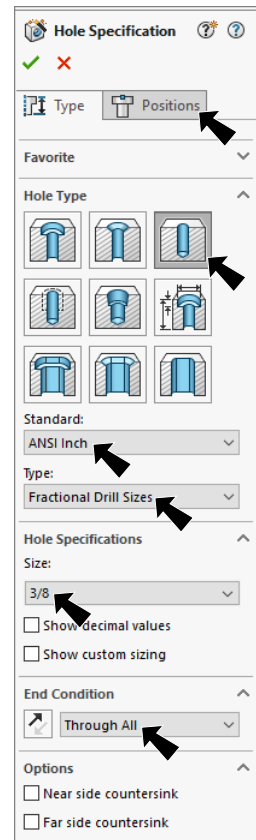
click **Hole**   
under Standard:  
select **ANSI Inch**  
under Type:  
select **Fractional Drill Sizes**  
under Size:  
select **3/8**  
under End Condition  
End Condition **Through All**

Step 4. Click **Positions** tab  at top of the Property Manager.

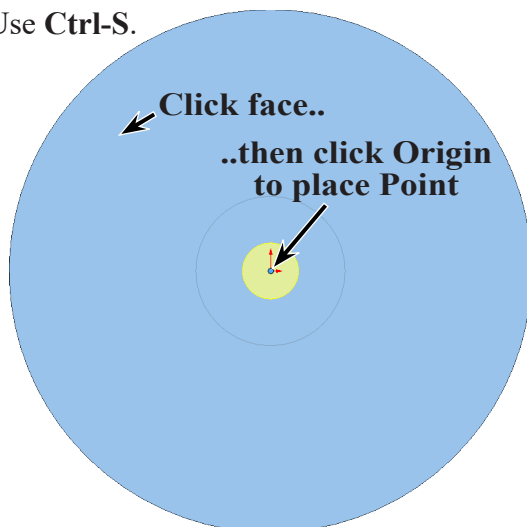
Step 5. Click **top face** one time as face for hole and click **Origin**  to place hole , **Fig. 9**.

Step 5. Click OK  in the Hole Wizard Property Manager.

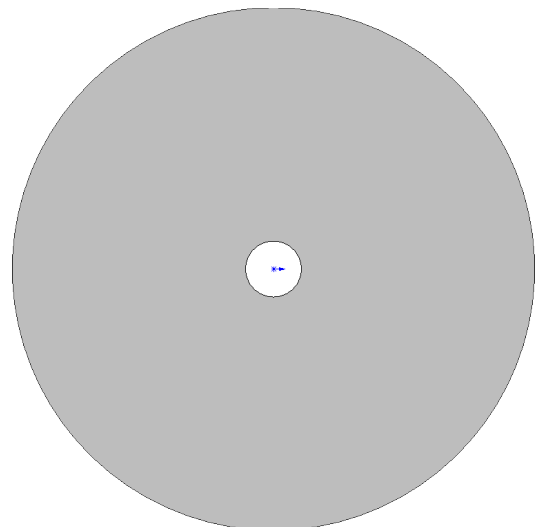
Step 6. Save. Use **Ctrl-S**.



**Fig. 8**



**Fig. 9**





**Fig. 10**

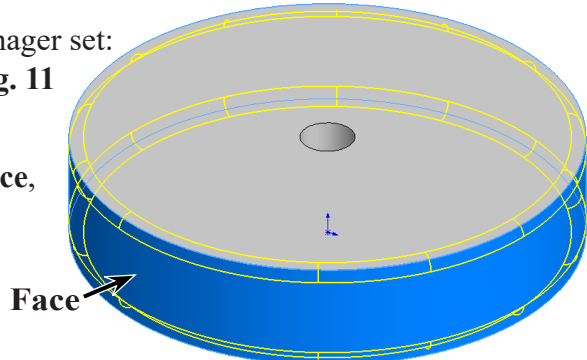
## E. Fillets.

Step 1. Click **Trimetric**  on the Standard Views toolbar.

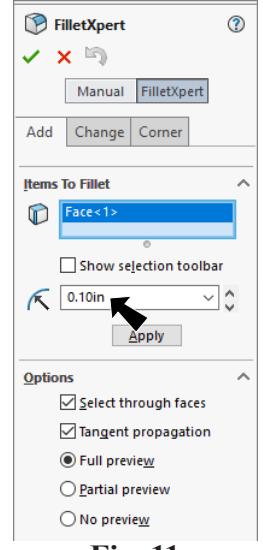
Step 2. Click **Fillet**  on the Features toolbar.

Step 3. In the Fillet Property Manager set:  
select **FilletXpert**, **Fig. 11**

**Radius**  **.1**  
click **cylindrical face**,  
**Fig. 12**  
click **OK** .



**Fig. 12**



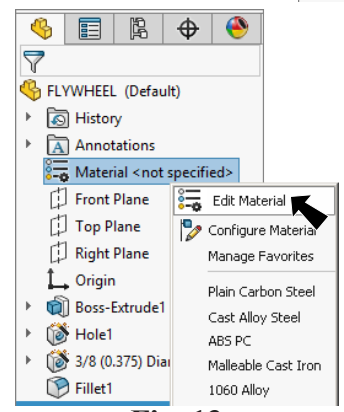
**Fig. 11**

## F. Material Pine.

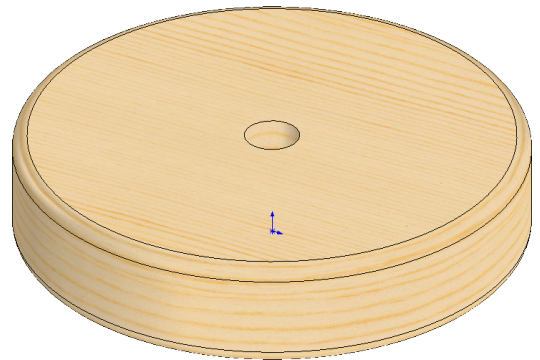
Step 1. **Right click** **Material**  in the Feature Manager and click **Edit Material**, **Fig. 13**.

Step 2. Expand **Woods** in the material tree and click **Pine**. Click **Apply** and **Close**, **Fig. 14**.

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



**Fig. 13**



**Fig. 14**