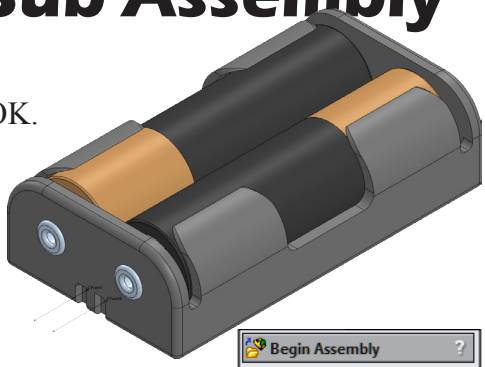
Chapter 25 JSS

# Battery Holder 2 x AA Sub Assembly



## A. Insert Battery Holder and Springs.

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

Step 2. Click **Keep Visible** in the Property Manager, **Fig. 1**.

Step 3. Click **Browse** in the Property Manager, **Fig. 1**.

Step 4. Select your **BATTERY HOLDER 2 X AA** file and click Open.

Step 5. Click OK in the Property Manager. This will place the Battery Holder origin at the assembly origin and fix the position of the Battery Holder so that it cannot move. This fixed component should have a **(f)** before its name in the Feature Manager (f) BATTERY HOLDER 2 X AA<1>.

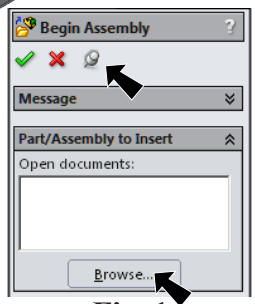



**Fig. 1**

Step 6. Click **Browse** in the Property Manager, **Fig. 1**.

Step 7. Select your **SPRING** file and click Open.

Step 8. Place **2 Springs** as positioned in **Fig. 2**.

Step 9. Click OK in the Property Manager when done.

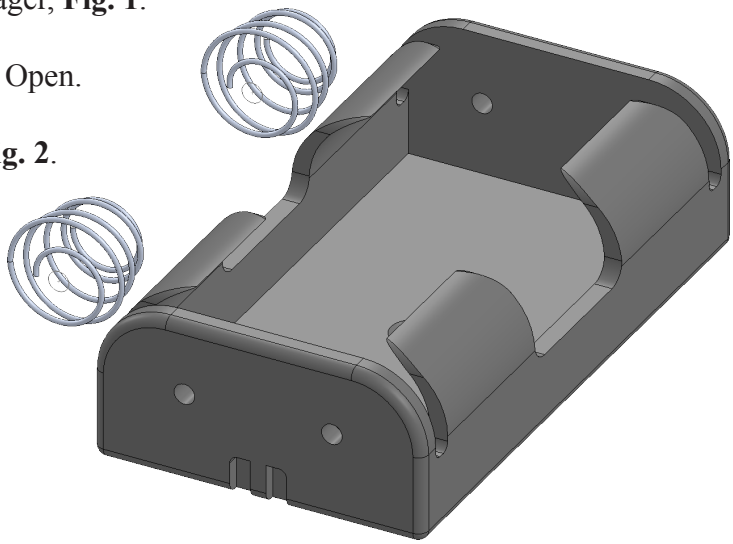


**Fig. 2**

## B. Save as "BATTERY HOLDER 2 x AA ASSEMBLY".

Step 1. Click File Menu > Save As.

Step 2. Key-in **BATTERY HOLDER 2 X AA ASSEMBLY** for the filename and press ENTER.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## C. Mate: Springs.

Step 1. Click **Mate**

on the Assembly toolbar.

Step 2. Click **edge of left rear Rivet hole on Battery Holder** and **circle sketch on Spring**, **Fig. 3**.

Step 3. Click **Flip Alignment** in the Mate pop-up and Add/Finish Mate to add **Coincident** mate, **Fig. 4** and **Fig. 5**.

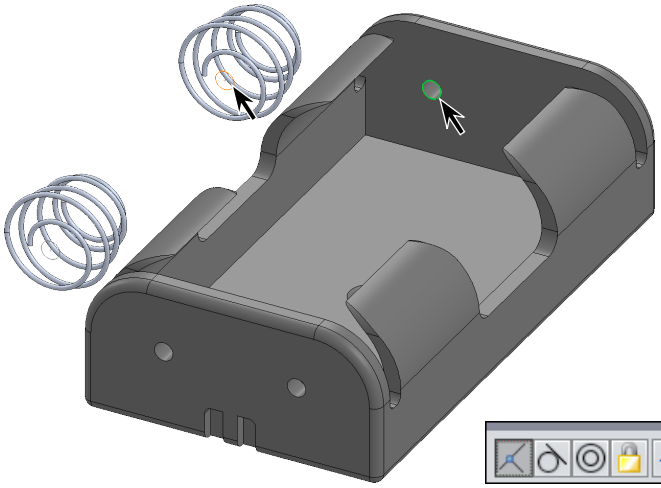


**Fig. 3**

**Fig. 4**

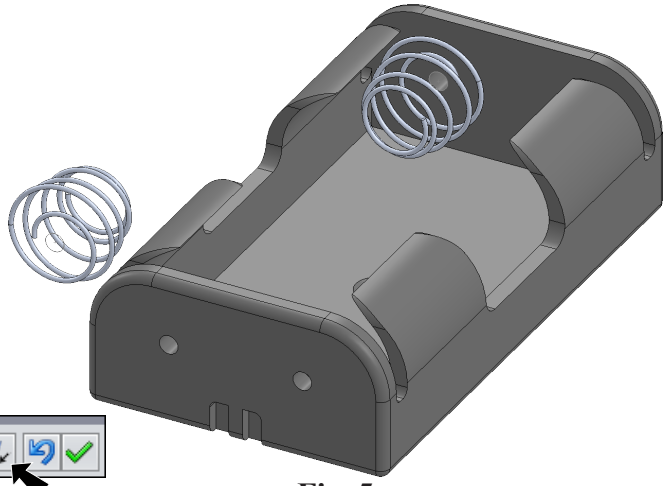


**Fig. 5**

Step 4. Rotate view to view **inside left front Rivet hole**, **Fig. 6**. To rotate, hold down middle mouse button (wheel) and drag.

Step 5. Click **edge of left front Rivet hole** and **circle sketch on other Spring**, **Fig. 6**.

Step 6. Click Add/Finish Mate to add **Coincident** mate.

Step 7. Click OK in the Property Manager.

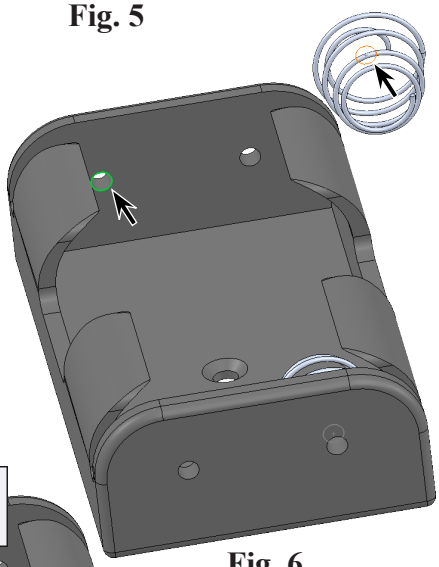


**Fig. 6**

## D. Hide Sketch.

Step 1. **Hide Sketch2 circle** in Spring. To hide, click **Sketch2 circle** in graphics area and **Hide** on the Context toolbar, **Fig. 7**.

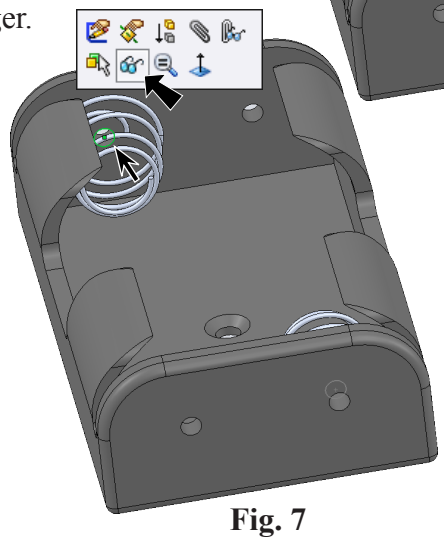


**Fig. 7**

Step 2. Save. Use **Ctrl-S**.

## E. Insert Rivet.

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

Step 2. Click **Insert Components** on the Assembly toolbar.

Step 3. Browse and select **RIVET** file, Open and place Rivet near right front hole in Battery Holder, **Fig. 8**.

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

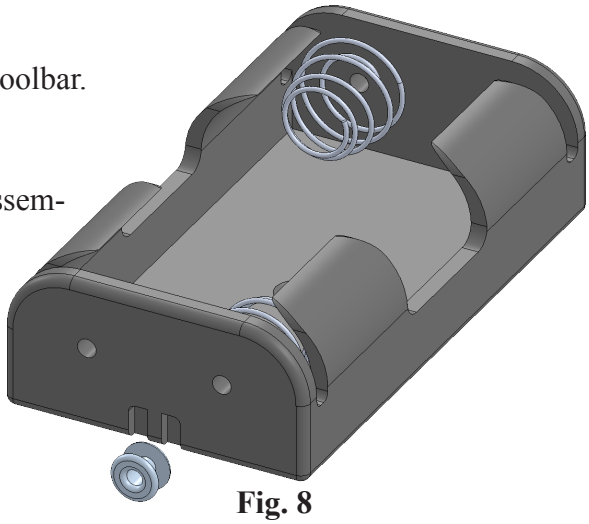


**Fig. 8**

## F. Mate: Rivet.

Step 1. Click **Mate** on the Assembly toolbar.

Step 2. Click a **cylindrical face of hole in Battery Holder** and **cylindrical face of Rivet**, **Fig. 9**.

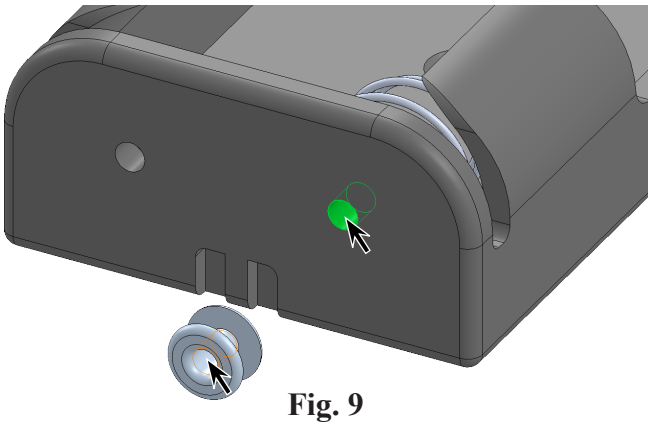


**Fig. 9**

Step 3. Click Add/Finish Mate to add **Concentric** mate.

Step 4. Click **front face of Battery Holder** and **front face of Rivet**, **Fig. 10**.

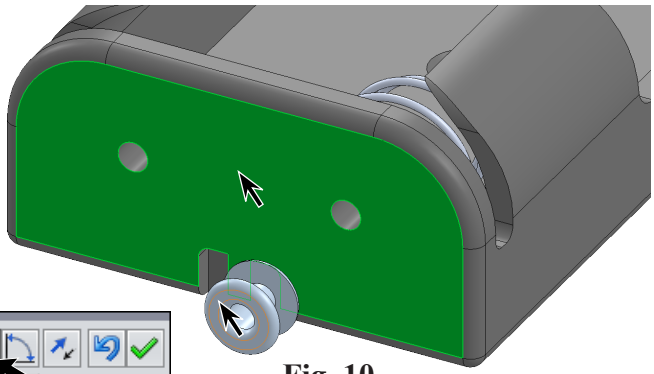


**Fig. 10**

Step 5. Click **Distance** in Mate pop-up, **Fig. 11**. Set **distance .5** and press ENTER. The Rivet should be positioned as shown in **Fig. 12**. If positioned in opposite direction, click **Flip Dimension** in the Mate pop-up, **Fig. 11**. Click Add/Finish Mate to add Distance mate.

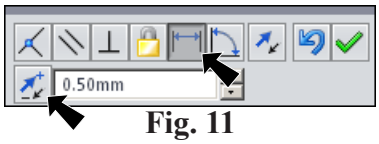



**Fig. 11**

Step 6. Click OK in the Property Manager.

Step 7. Save. Use **Ctrl-S**.

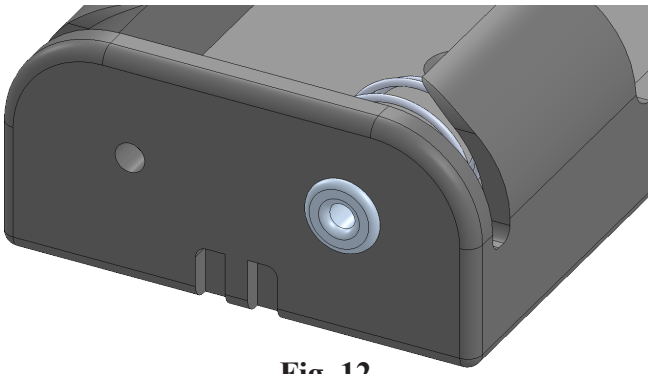


**Fig. 12**

## G. Mirror Rivet Right Plane.

Step 1. **Ctrl click** the **Right Plane** and **Rivet** in the Feature Manager to select both, **Fig. 13**.

Step 2. Click Insert Menu > Mirror Components.

Step 3. In the Mirror Components Property Manager click OK , **Fig. 14** and **Fig. 15**.

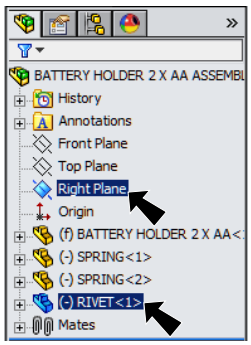



Fig. 13

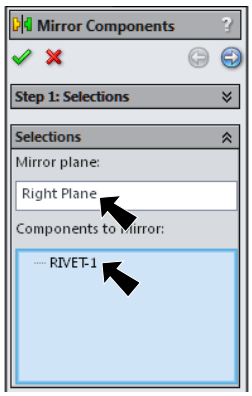



Fig. 14

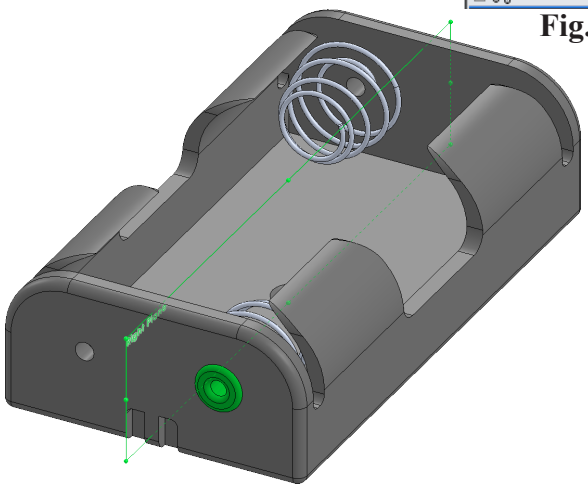


Fig. 15

## H. Mirror Rivets Front Plane.

Step 1. **Ctrl click** the **Front Plane** , **Rivet** and **Mirror Component** feature in the Feature Manager to select all three, **Fig. 16**.

Step 2. Click Insert Menu > Mirror Components.

Step 3. In the Mirror Components Property Manager click OK , **Fig. 17** and **Fig. 18**.

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

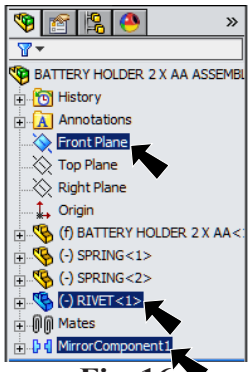



Fig. 16

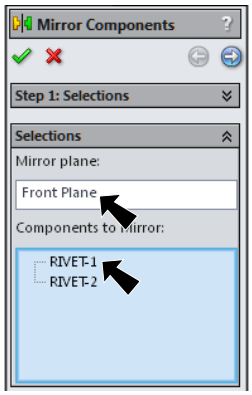



Fig. 17

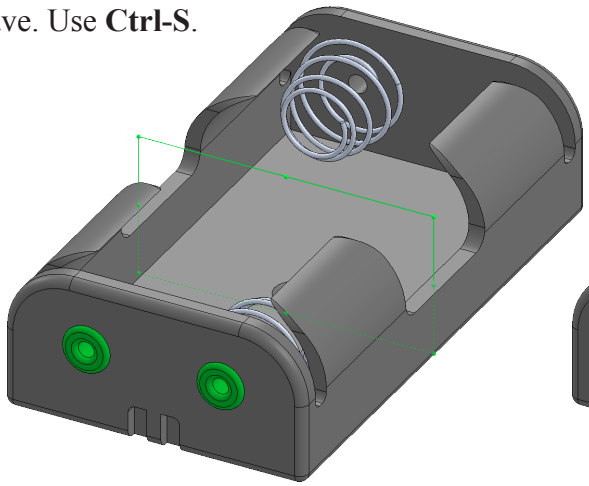


Fig. 18

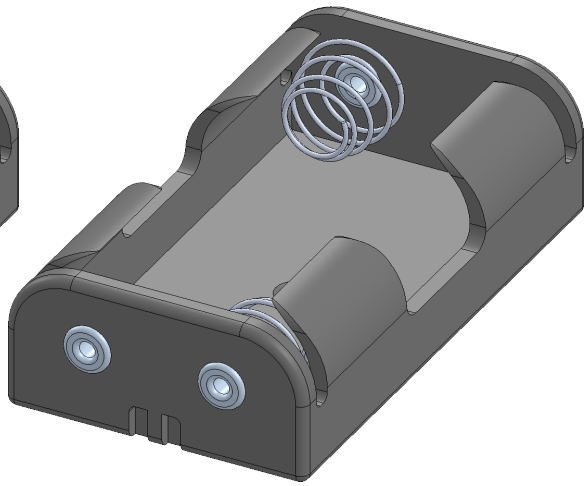
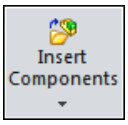


Fig. 19

## I. Insert 2 Batteries AA.

Step 1. Click **Insert Components** 

on the Assembly toolbar.

Step 2. Click **Keep Visible** in the Property Manager.

Step 3. Click **Browse** in the Property Manager.

Step 4. Select **BATTERY AA** file, Open and **place 2 Batteries** along side Holder, **Fig. 20**.

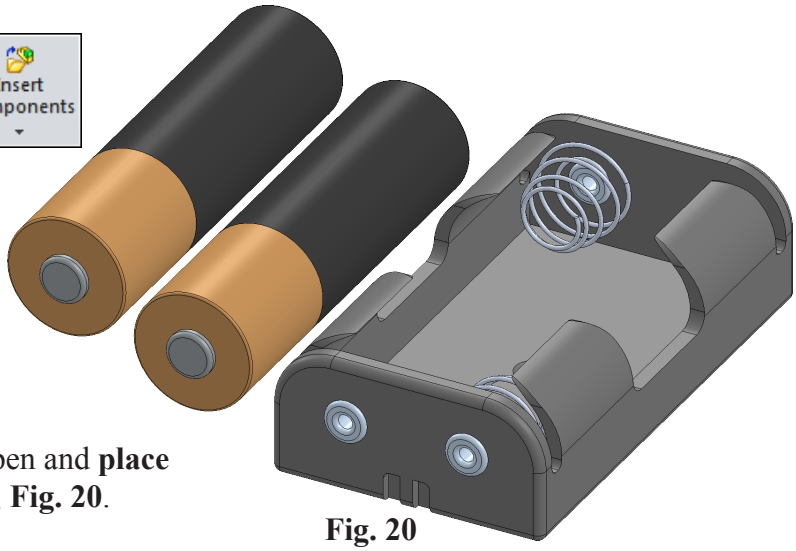


**Fig. 20**

Step 5. Click OK in the Property Manager when done.

## J. Mate: Battery 1.

Step 1. Click **Mate**

on the Assembly toolbar.

Step 2. Click **front face Battery terminal**, **Fig. 21**.

Step 3. Rotate view to view **inside front Rivet**, **Fig. 22**. To rotate, hold down middle mouse button (wheel) and drag.

Step 4. Click **flat face of Rivet**, **Fig. 22**.

Step 5. Click Add/Finish Mate to add **Coincident** mate.

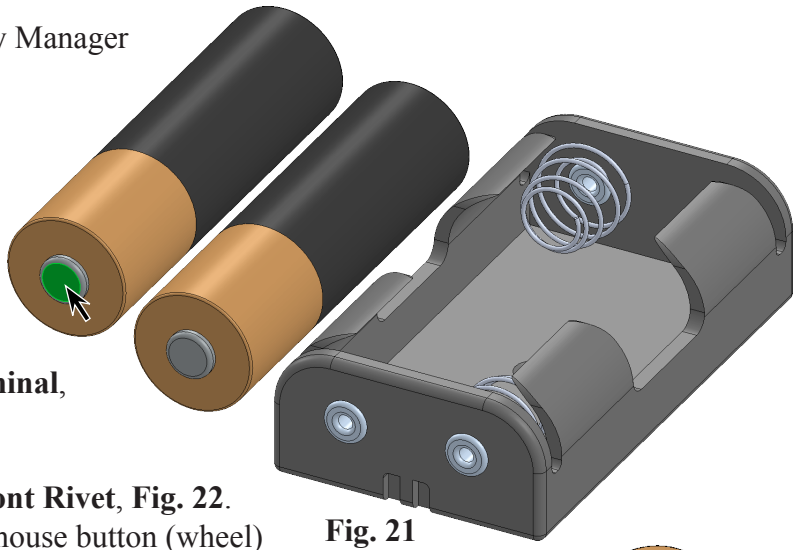


**Fig. 21**

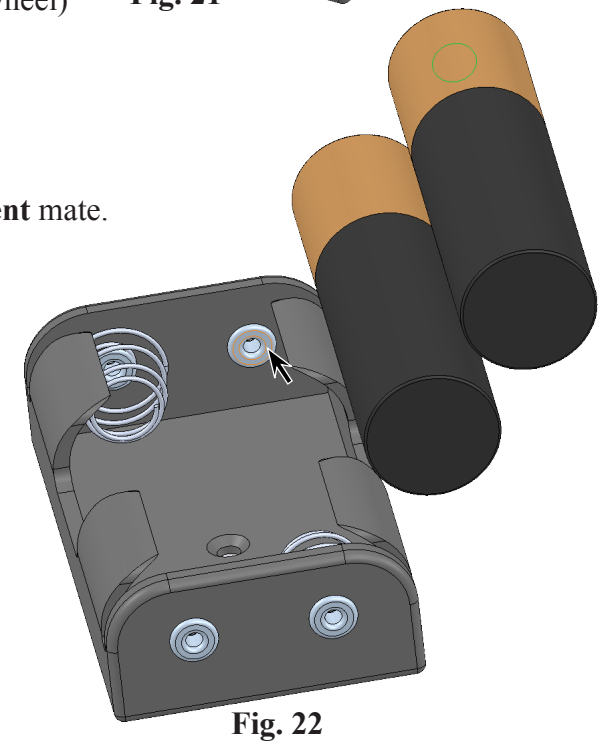


**Fig. 22**

Step 6. Click **Trimetric** on the Standard Views toolbar.

Step 7. Click a **cylindrical face of Rivet hole** and **cylindrical face of Battery**, **Fig. 23**.

Step 8. Click Add/Finish Mate to add **Concentric** mate.

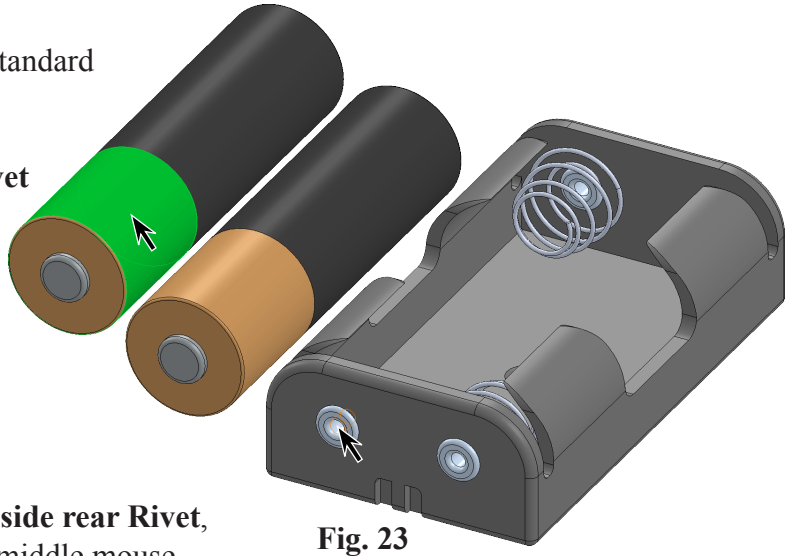


**Fig. 23**

## K. Mate: Battery 2.

Step 1. Rotate view slightly to view **inside rear Rivet**, **Fig. 24**. To rotate, hold down middle mouse button (wheel) and drag.

Step 2. Click **front face Battery terminal** and **flat face of rear Rivet**, **Fig. 24**.

Step 3. Click **Flip Alignment** in the Mate pop-up, **Fig. 25**. Click Add/Finish Mate to add **Co-incident** mate.

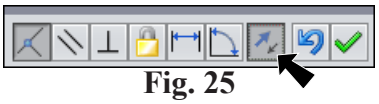


**Fig. 25**

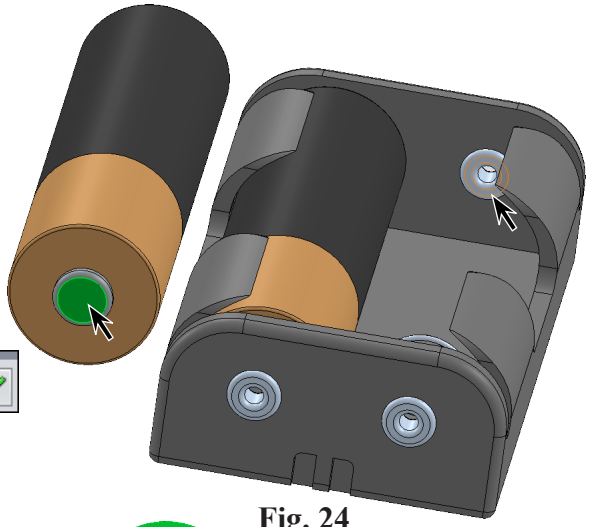


**Fig. 24**

Step 4. Click a **cylindrical face of Rivet hole** and **cylindrical face of Battery**, **Fig. 26**.

Step 5. Click Add/Finish Mate to add **Concentric** mate.

Step 6. Click **Trimetric** on the Standard Views toolbar.

Step 7. Click OK in the Property Manager.

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

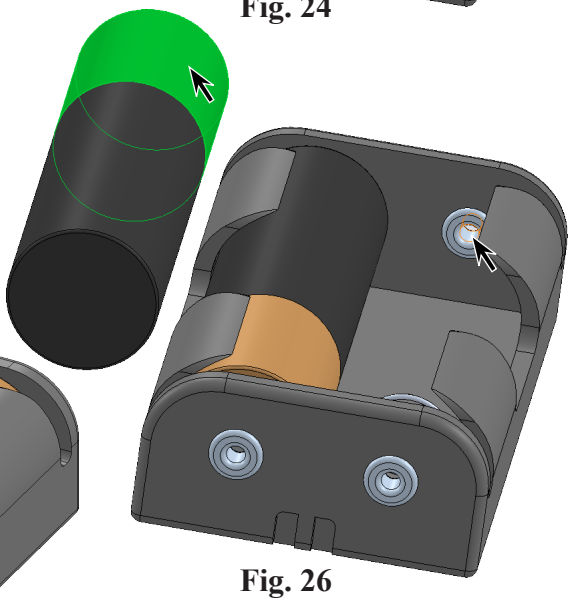


**Fig. 26**

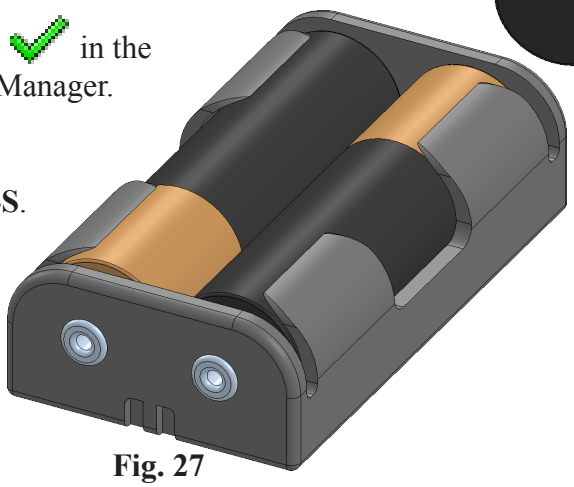


**Fig. 27**