

Final Report Work Chapter 2

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Link to this SSA

<https://www.overleaf.com/read/sbdhdwwkyczc#0dfeca>

Goals

- To add the Trigger Mechanism to the final assembly
- To add a labeled picture of the final assembly in the beginning of Chapter 2
- To replace the placeholders "Reference number here" in the report with the respective numbers of the components.

Summary

A labeled image of the final assembly was added to the final report, along with using the correct labels in the text.

1 Elaboration

1.1 Adding Trigger Mechanism to Final Assembly

Firstly, a suitable hole needs to be made in the top of the frame as well as the top of the drum to accommodate for the pin that triggers the mechanism.

Hence, a hole of diameter 4 mm was designed on the top of the frame as shown in figure 1

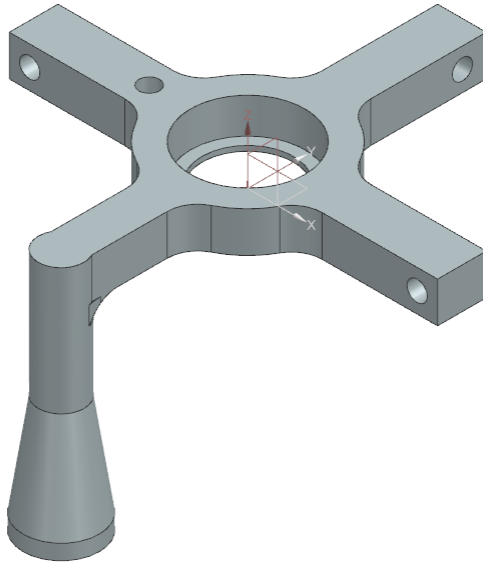


Figure 1: Hole in Frame

Next, the hole was projected onto the top of the drum as shown in figure 2

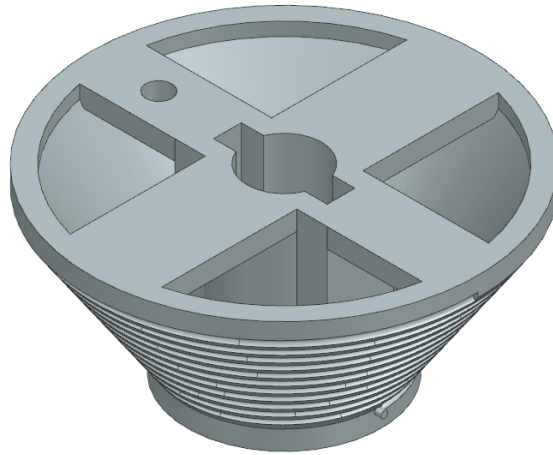


Figure 2: Hole in Drum

Finally, the pin was sketched (figure 3) and added to the assembly as shown in figure 4

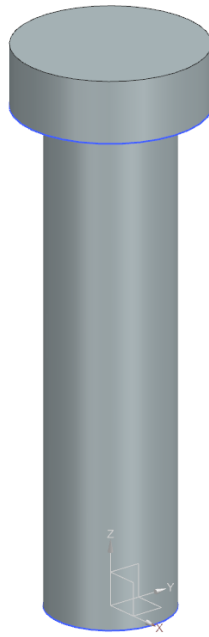


Figure 3: Pin

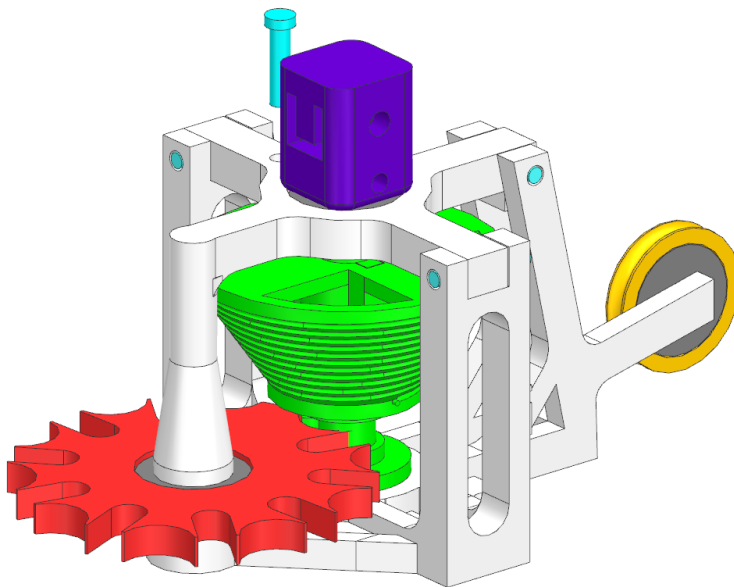


Figure 4: Final Assembly with Color

A different color scheme was attempted as well, (as shown below in figure 5) however it was not as clear as figure 4

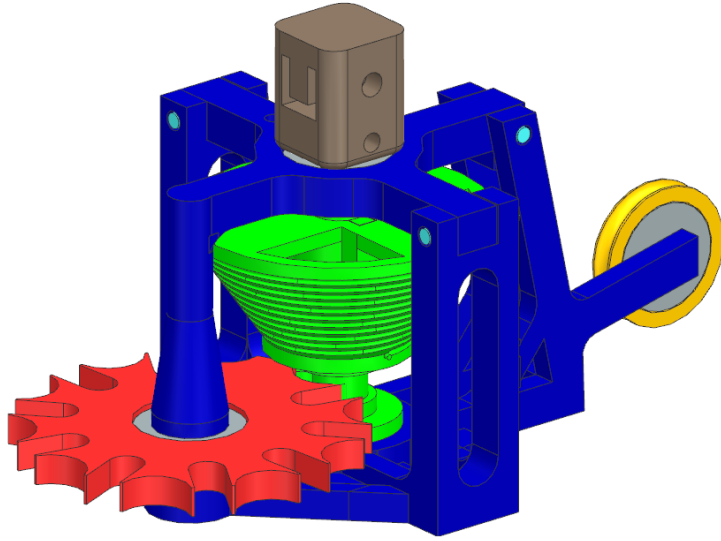


Figure 5: Variation of Color

For the above 2 images, the U-Beam was hidden. However, for the final image, the U-beam was made translucent. This allowed the components behind the U beam to be clearly visible.

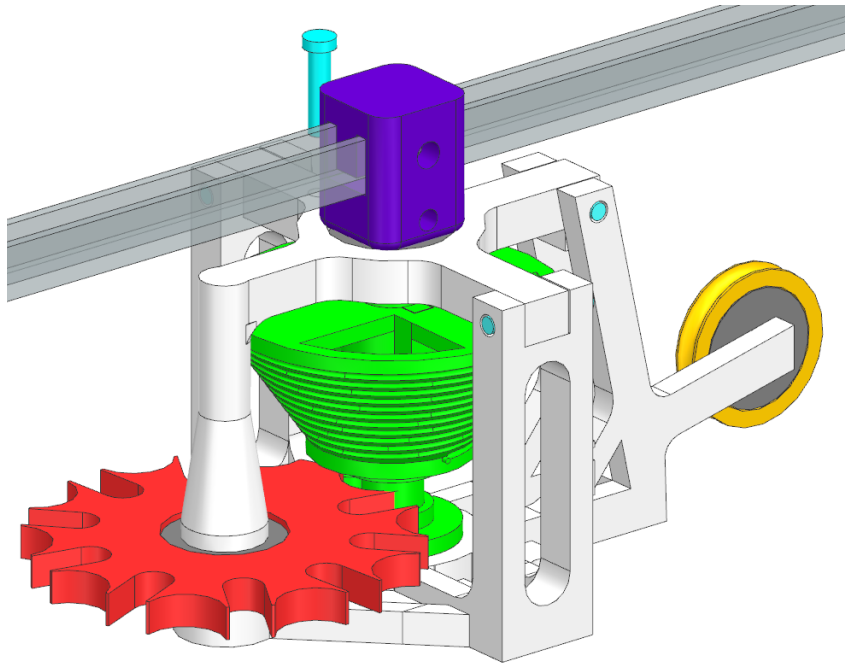


Figure 6: Final Assembly with U-beam

Now, the issue was that the rotating arm was quite long. Hence, getting the whole system to fit clearly in one picture would not be possible.

To solve this, I thought of shortening the arm length just for the reference picture in the chapter, and mention it as a note that the image is not to scale, and is only for reference.

Such an image is displayed below in figure 7:

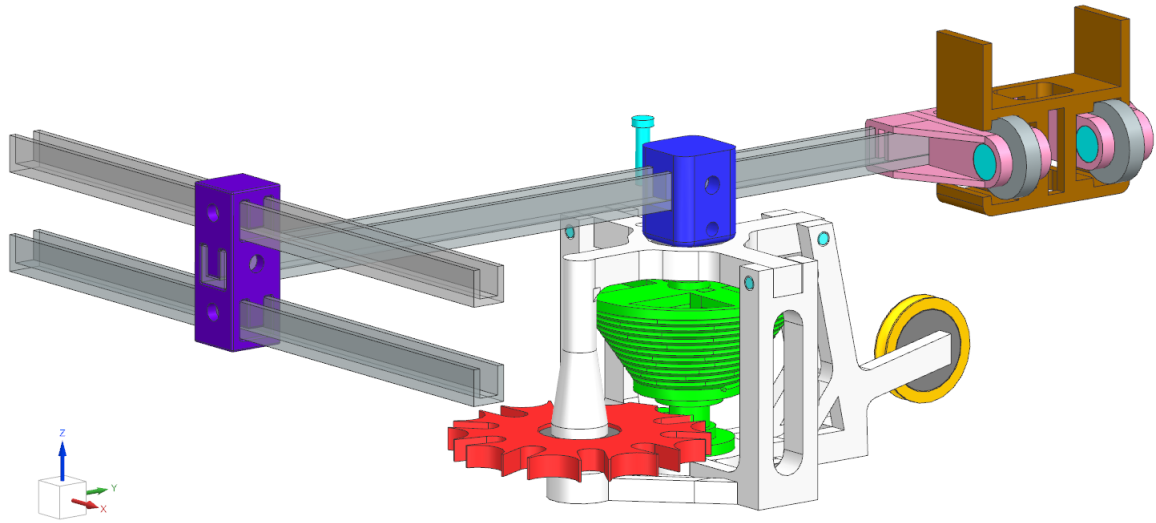


Figure 7: Final Assembly (Not to Scale)

Finally, a number scheme was added to the image so that each component could be referred to. This is shown in figure 8

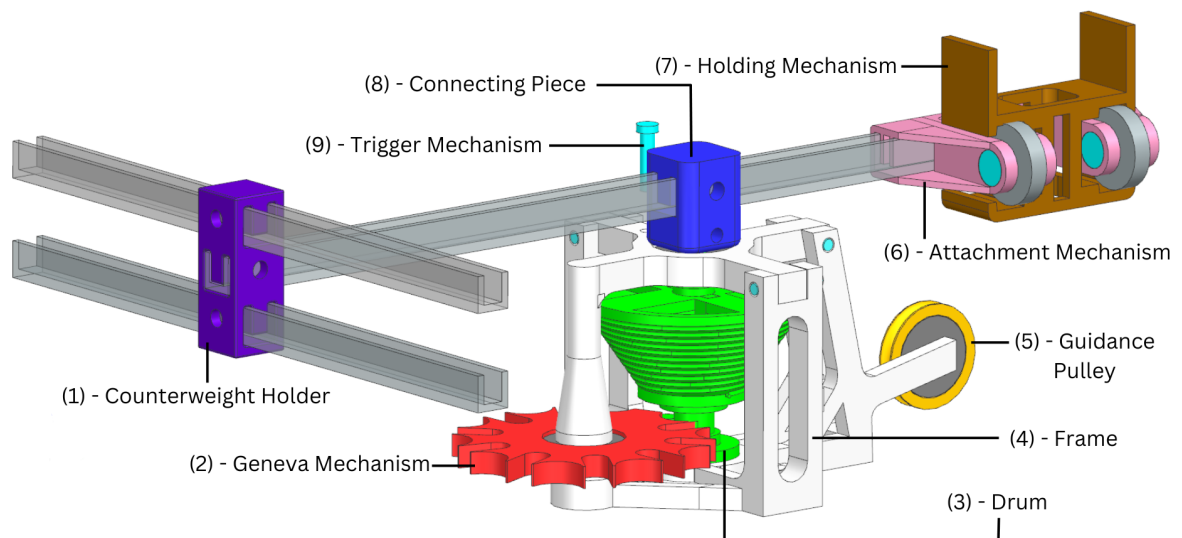


Figure 8: Labelled Assembly