

I need to analyze the provided machine data to identify and correct the flaws.

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### Analysis of Defects:

- **Severe Structural Imbalance.** The machine has a tiny support base (1, 2, 3, 4, 5). The long arm with the heavy Boulder 12 will **create a large torque, causing the machine to tip over backward** (towards z-). ...
- **Incorrect Pivot Orientation.** The block 9 spins the arm horizontally. ...Let's check the current setup: ...**Rotation around the x-axis causes a swing in the y-z plane...** However, the Log 10 is attached to the 'Up' face of the pivot. This **means the arm starts pointing straight up**, which is ineffective for a throw. ...
- **Improper Container Setup.** After moving the arm, I must also move the Container 11 to an 'Up' attachable face on the Log 10 to **make it face upward y+ again**. The Log 10 has several 'Up' attachable faces; face\_id 8 is a suitable choice.

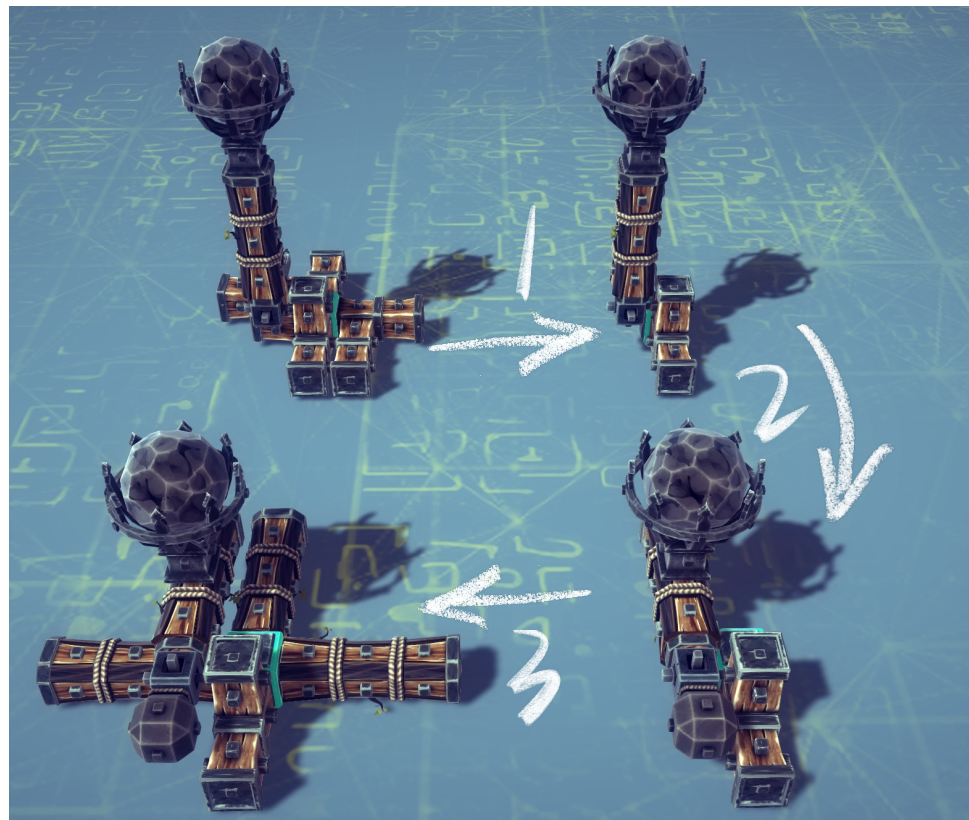
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### Consolidated Modification Plan:

1. **Remove Old Base:** Remove blocks [3], [4], and [6] first, then remove their parents [1], [2], and [5].
2. **Reposition Arm And Container:** Move Log [10] from Rotating Block [9]'s face\_id: 3 (Up) to face\_id: 2 (Right). Move Container [11] from Log [10]'s face\_id: 0 (Front) to face\_id: 8 (Up). And Add a Ballast [35] to Rotating Block [9] at face\_id: 1 (Left).
3. **Build New Base:** Add three Log [63] blocks to the Starting Block [0] at face\_id: 1 (Back), face\_id: 2 (Left), and face\_id: 3 (Right).

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(a) Gemini 2.5 Pro CoT



(b) Modification Steps