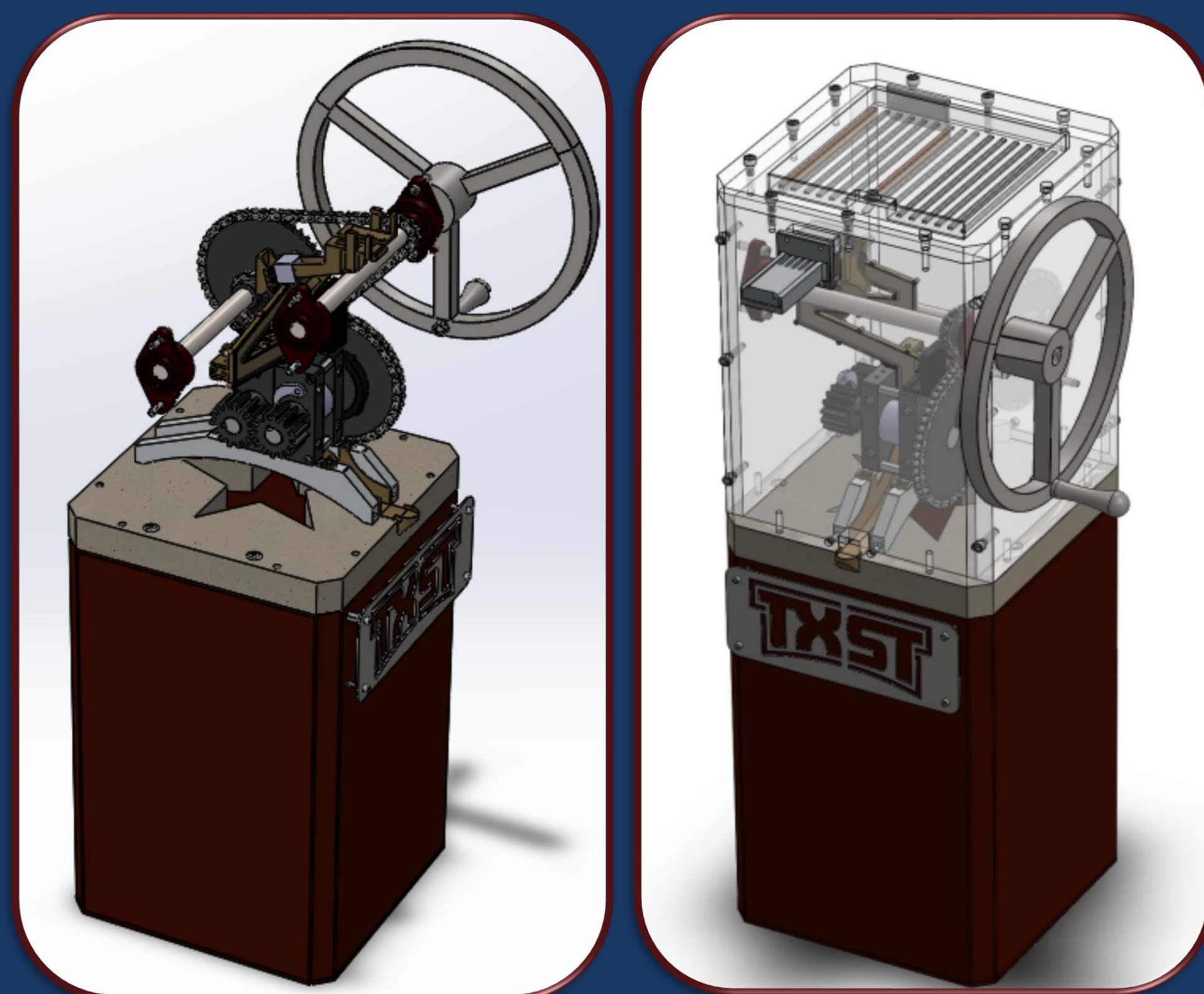
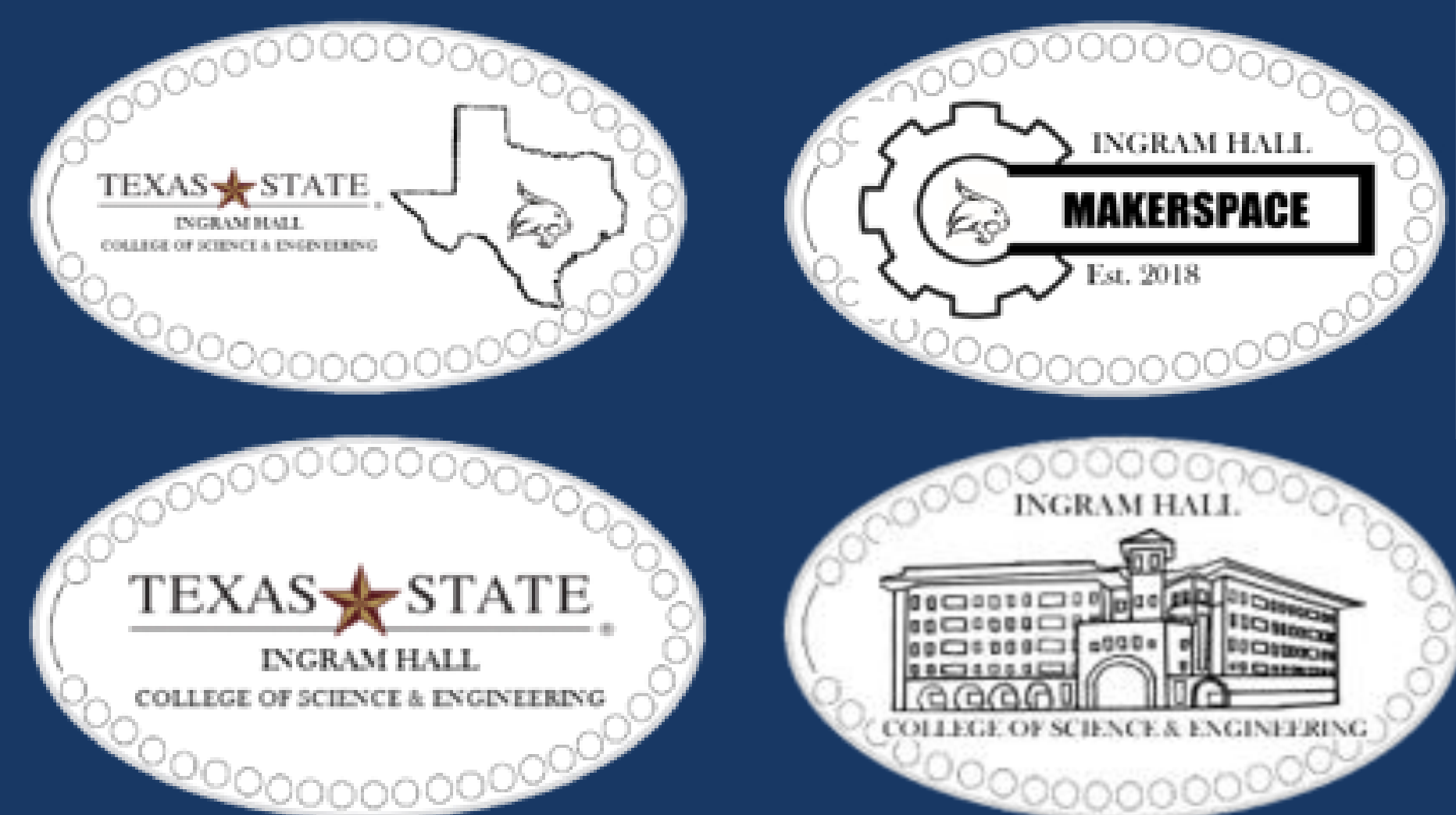


History

Objective

Redesign and manufacture a penny press that incorporates aspects of the old design but addresses certain key design flaws.



Background

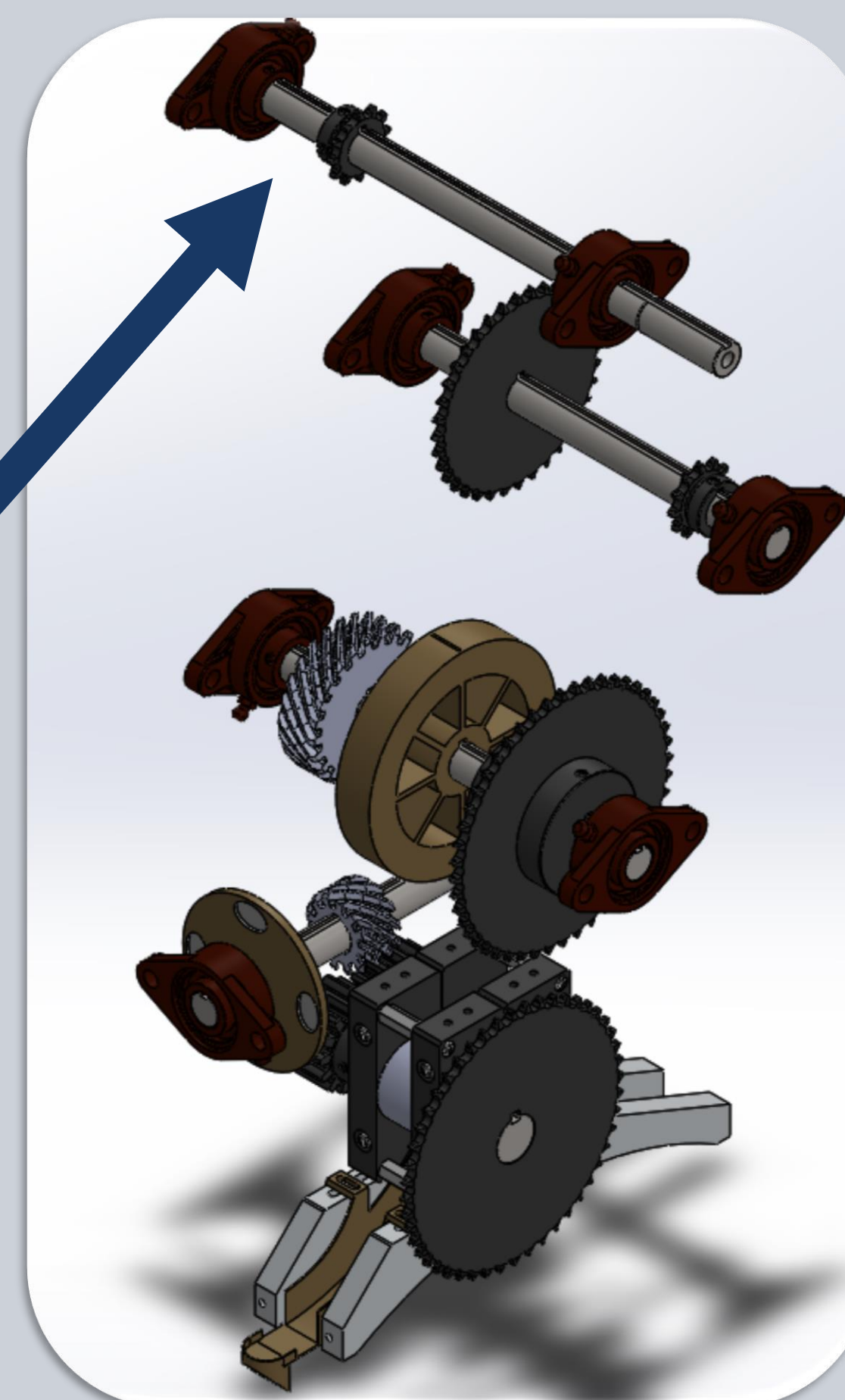
The Penny Press Project was first developed by partnership between Hunt & Hunt Ltd and former students at Texas State University in 2019. The original objective was to develop a multi-mechanism device to press and dispense a commemorative coin from a standard US penny. Today the penny press has been decommissioned and requires a more robust design to withstand use over time.

New Design

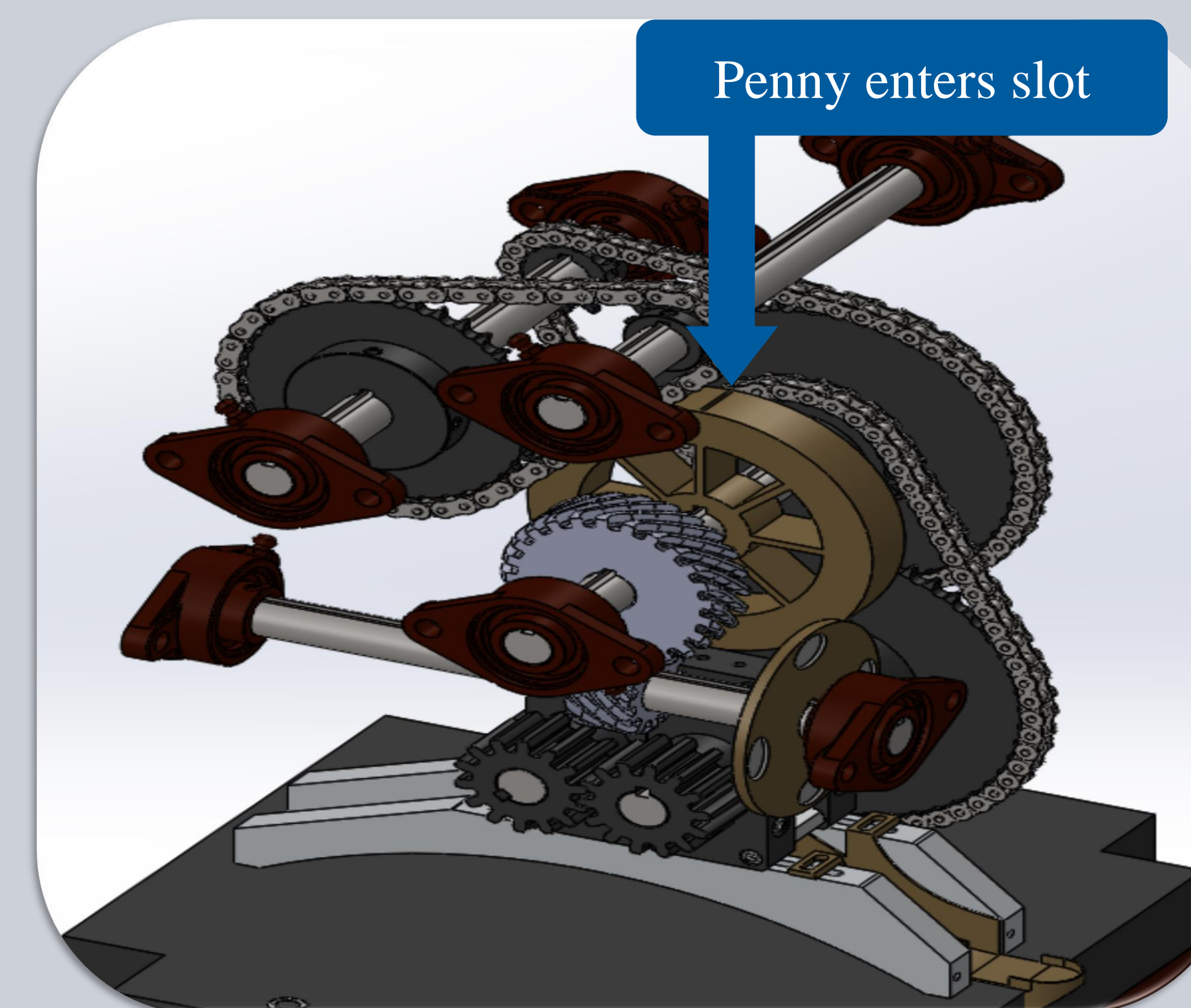
Increased overall force ✓

24:1 Gear Ratio

Added a third shaft for an extra gear pair

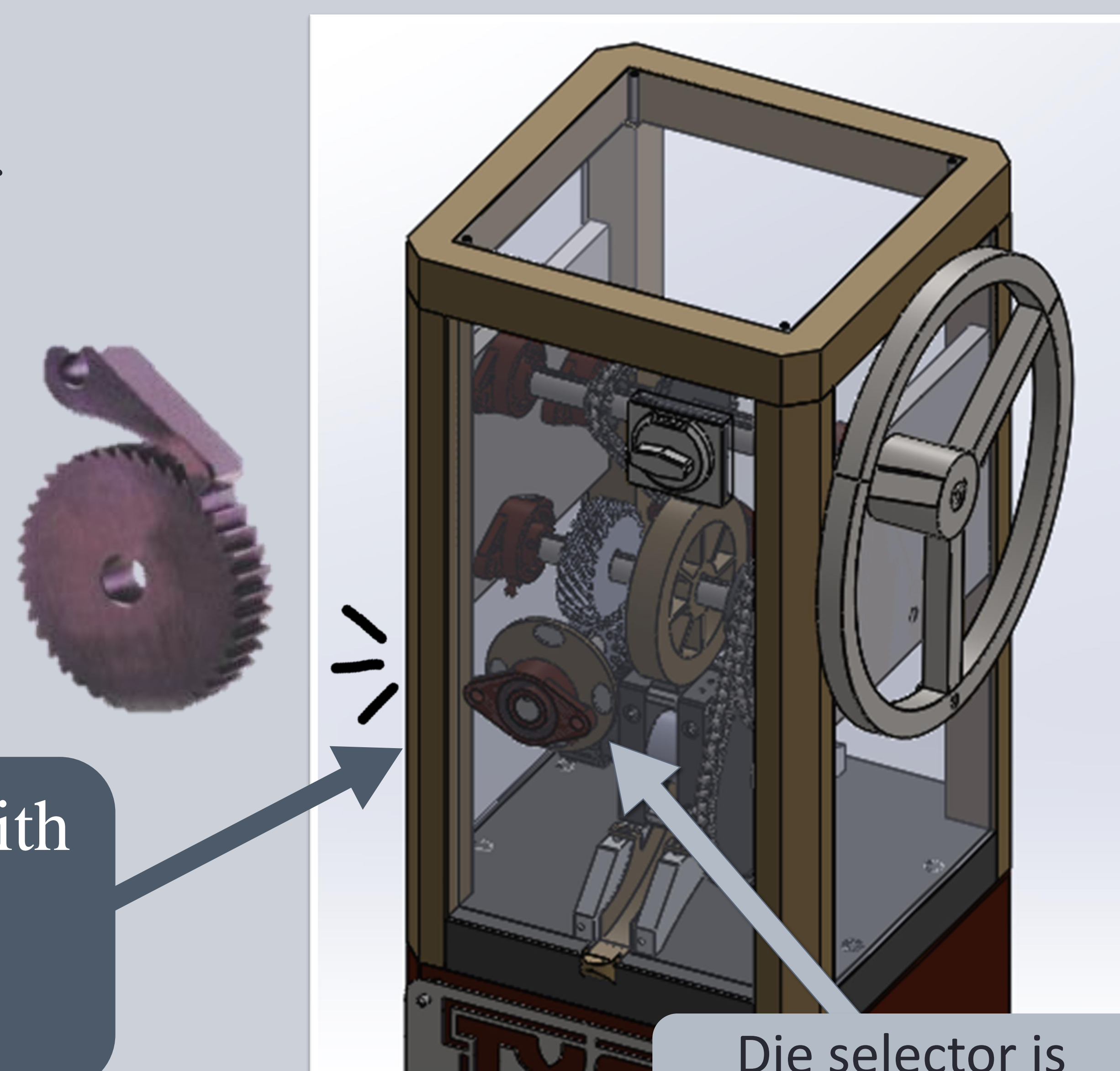


- Only one penny can fall into die at a time ✓
- Ratio is timed perfectly so that penny will not be skewed when it enters the die ✓



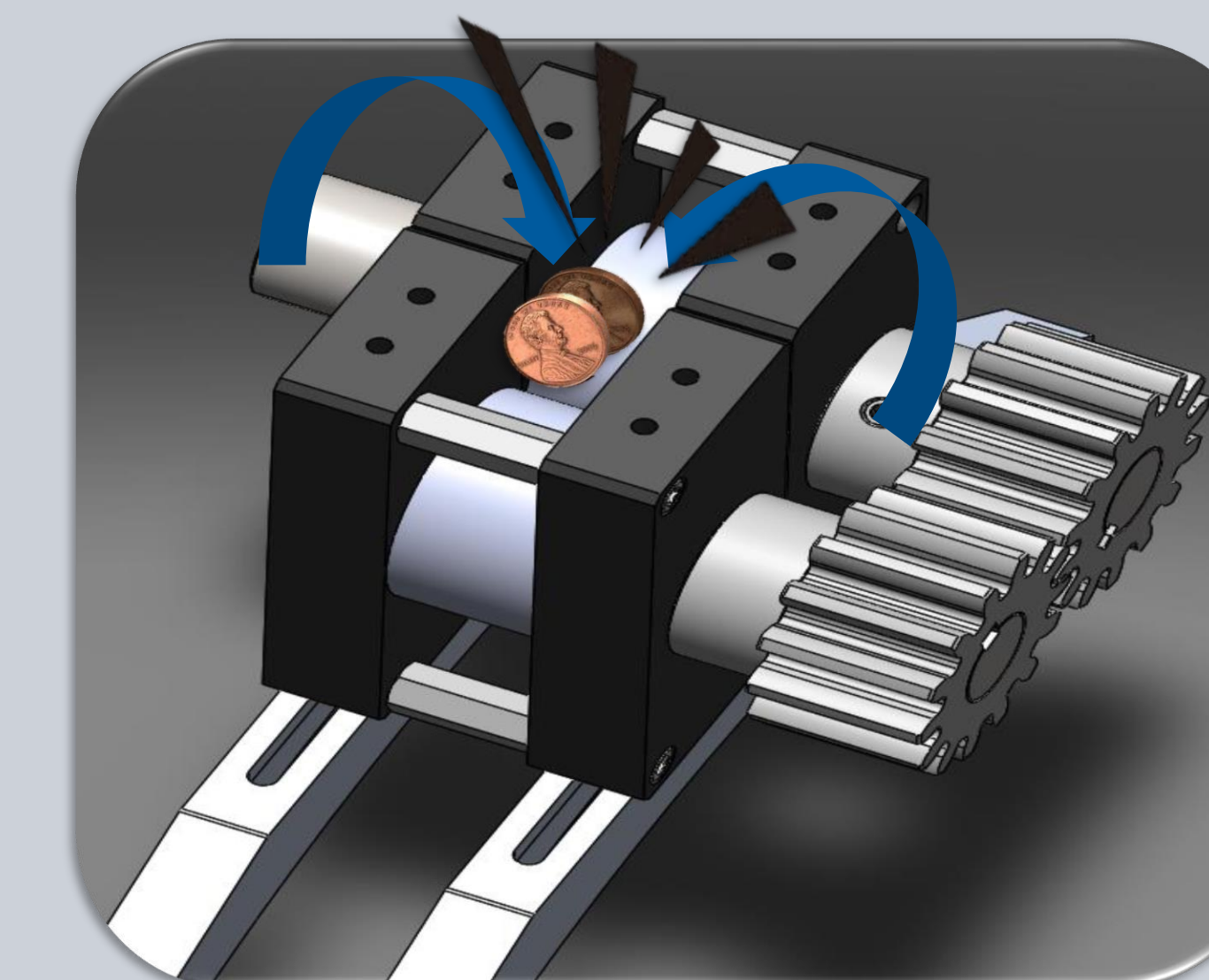
- More robust structure, eliminating possibility of damage due to torque ✓
- Easier maintenance because of ratchet and pawl gear system ✓

Added support beams with paneling to receive the force from the shafts



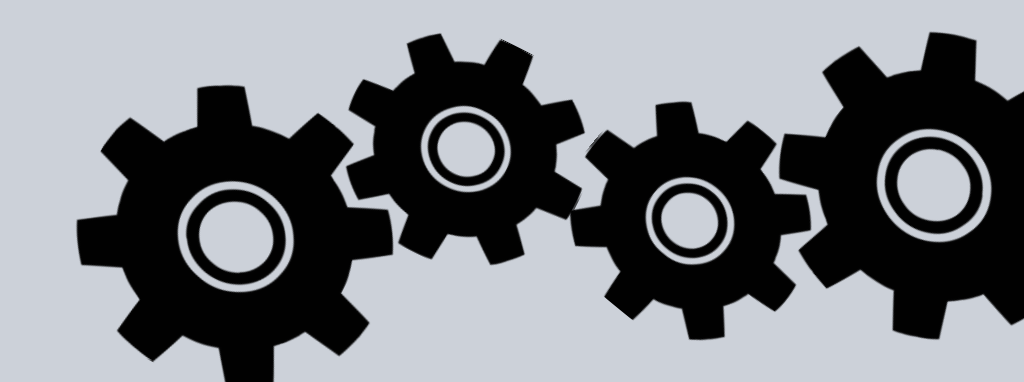
Problem

Multiple pennies fell through die simultaneously resulting in an overload of force that damaged the structure

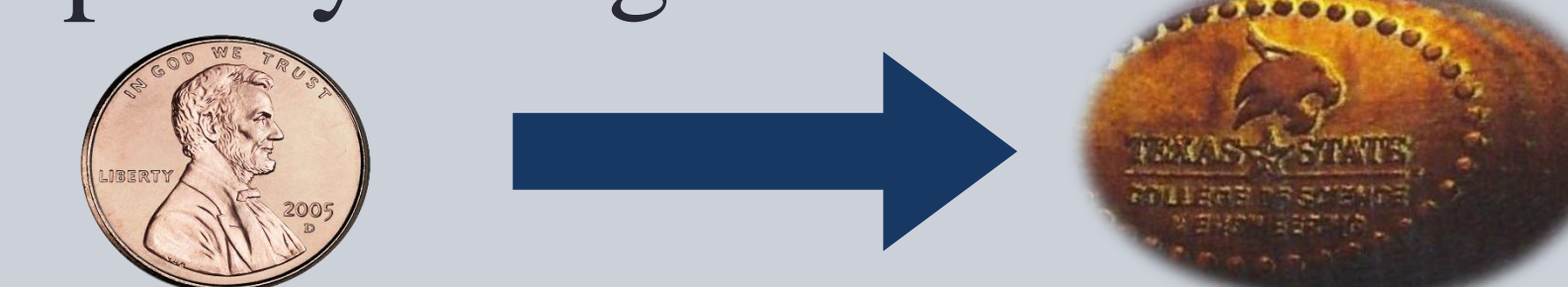


Gear ratio does not meet force requirements

16:1 ratio → Needs to be 24:1



Pennies didn't enter press at right time which skewed the penny design



Inability to reverse crank and allow for easy maintenance