We sought to redesign the popular commercial version, whose first step of assembly requires the delicate opposition of the small fat tips, which only exist because the structure is not really a cube. If it were, the flat tips would become pairs of sharp points which would be impossible to oppose. So we tried.

Problem 1: The sharp points were fragile. They bent and broke.
Problem 2: The puzzle is too easy! Just squeeze the yellow pieces between the red pieces, twist them aside, drop in a blue piece, secure it by untwisting the yellows, flip it over, and repeat for the other blue piece.

But try twisting a square peg in a square hole!

Is this even feasible? Rohan Ridenour (age 10) said it obviously was, via the same coordinated motion required for our cube puzzle:

As proof, Rohan holds one up:

But sadly, we ran out of time and money. Commercial Spacecubes run about $6, but Shapeways wanted ten times that for our Tubecube, which still needs to have some detents embossed on it to compensate for wear. And poor Neil had five finals and missed G12 entirely!