

Make it Real CAD Engineering Challenge

The Claw Part

My piece is a claw. This claw works by having 2 motors on the top. The shafts reach down into shaft lock plates and those plates hold onto the claw pieces. Then the left claw goes counterclockwise and the right clockwise to create an inverted claw effect. This will make it easier to grip onto the Risers and prevent it from slipping off the claw. This would be even more crucial when having to stack Risers, because sometimes the Risers slip off the claw, and you would not be able to make a stack.

Also, this claw would be better to pick up 2 Risers at a time if you had the regular arms too. For example, when you had the regular arms, you'd have to pick it up from the bottom and the top Riser would fall off. But, with the claw, the claw would pick up the bottom one and the arm would pick up the top. In this way you could make a completed stack.

The claws are intended to snap onto 2x4 beams with 1x1 connector pins. The beams attach to 2x2 shaft lock plates connected to a shaft. 2 motors will move the claws inward and outward. I used Tinkercad to design my robot piece. I used the Scribble shape to draw the claw, and I took cylinders and made them holes. I took the cylinder holes and put them into the claw, and then I made the holes and the claw a whole.

I learned that you must be creative while looking for solutions, especially while needing to create something new. Tinkercad helps you on a robotics team because you can design a part that can help you pick up more parts or having a tighter grip. One job that could use Tinkercad is a 3D game designer. Learning how to do 3D designs in software like Tinkercad will help me in my career of game designing because I will be creating experience and having fun. All I need to do is imagine.

By: Maksym Sukhotskyi

Team 5481C