

# AROUND THE MAKER WORKSHOP, BROUGHT TO YOU BY DREMEL

By John Edgar Park

» Let your kids lay siege to the backyard in a fantastically fun cardboard fort.

It's no secret to kids that a big cardboard box is the best play fort you can have. Find a washing machine box on the curb, drag it home: instant fun. If you want some amenities, such as a drawbridge door or firing slits, you need to put a little extra work into it.

I've embellished ours in the past with everything from a Swiss Army knife to a box cutter. Turns out, a Dremel Multi-Max is a much easier, more controllable tool for this than anything I've tried. Add some good fasteners and there's no limit to the size and complexity of the cardboard castles you can construct.

## Directions

**Step 1:** The first thing I did was get my kids' input on the design. My daughter stood for a "fitting" while I marked up the exterior with sticky notes to indicate rough door and window measurements (Figure A).

**Note:** the box is upside-down, with the original top serving as the floor.

**Step 2:** I then marked the lines for the crenellations, to give the fort that authentic castle look. Then, I put on my safety goggles and my earplugs (this gets pretty loud indoors, but there's almost no dust or mess, so I didn't need to go outside) and used the Multi-Max to cut the crenellations out (Figure B).

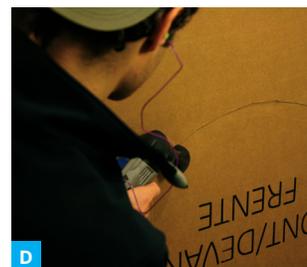
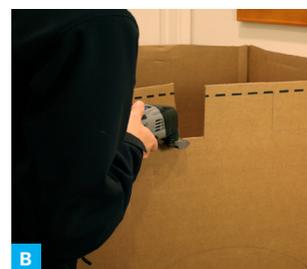
**! WARNING:** It's always important to use safety goggles or safety glasses when operating any power tools.

**Step 3:** Next, I used a yardstick and pencil to mark the door cutlines (Figure C). I cut the door sides and top with the Multi-Max, leaving the bottom intact so that the door would open like a drawbridge (Figure D).



## MATERIALS AND TOOLS

- » **Dremel Multi-Max oscillating tool** with circular drywall blade
- » **Drill with 1/4" bit**
- » **Big cardboard box** from a fridge or washer/dryer
- » **Cardboard supports** that come with the box (optional)
- » **Small cardboard tube**
- » **Box rivets** from Mr. McGroovy's ([mrmcgroovys.com](http://mrmcgroovys.com)) or other fasteners
- » **Ruler and pencil**
- » **Earplugs**
- » **Twine**



**Step 4:** I grabbed two scrap pieces of cardboard (from the creellation cuts) to use as string brackets. I set them in place on the fort's doorframe and then drilled two holes in each for fastening (Figure E). Don't be tempted to use duct tape for fort assembly (it looks tacky and falls apart quickly)!

Then I snapped a pair of box rivets through each hole to secure the string brackets (Figure F).

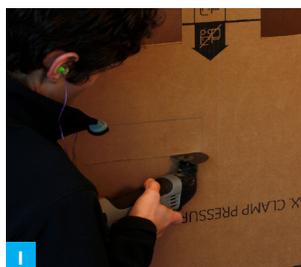
**Step 5:** With the door closed, I drilled holes through the door and the string brackets behind it on each side. I cut a length of twine and threaded it through the door and each hole (Figure G). Make sure you measure enough twine to allow the door to open fully.

**Step 6:** I tied the twine ends to a cardboard tube to act as a door handle. Pull on it from inside and the door closes behind you (Figure H). Loop the twine over the box rivets to "lock."

**Step 7:** Firing slits are in high demand when someone is storming your castle or frontier outpost. So I measured, marked, and cut the slits out (Figures I and J) so that my darling children can continue to exchange Nerf darts when one is encroaching on the other's turf.

**Step 8:** You can cut out more windows as desired, or even attach additional boxes for tunnels, box windows, towers, and more. I cut windows into a small box, cut an opening in the fort to match, and riveted the box flaps inside to securely fasten it (Figure K).

**Step 9:** My kids love it so much I decided to go one step farther and attach cardboard corner frames and cross braces. I cut some doubled-up L-shaped cardboard to length with the Multi-Max, drilled, and fastened them using more box rivets (Figure L). These add stability to the fort, in case someone gets bored and invents the battering ram.



### About the Author

John Edgar Park is the host of *Make:* television and a CG Supervisor at DisneyToon Studios. Find him online at [jpixl.net](http://jpixl.net).