





# Play with Clay -- Turn an executive spinning top

by Walter Wager

<p>A spinning top made of polymer clay is not just pretty to look at, they are also fun to play with. This article explains the steps in working with the polymer clay and turning it (no pun intended) into a top. Add a platform to spin it on and you have a toy at home on any executive's desk.</p>	
<p>Start with the clay - Polymer clay (poly vinyl chloride) comes in many different brands and each has different characteristics. I recommend using Premo clay by Sculpey because it has nice turning characteristics. The goal is to produce a disk of clay that we can turn as the body of our top.</p>	
<p>Polymer clay is stiff coming out of the package and has to be "conditioned". This means that it has to be squeezed, rolled, and manipulated until it is soft enough to mould. Different clays require more or less conditioning. Use a rolling pin and work the clay on a flat surface, or just work it in your hands until it gets soft and is easy to work with.</p>	
<p>Shape the clay into 1/2" thick disks. To do this I use a home-made disk press. Mine is made from an old vitamin bottle. Cut out the bottom, drill a hole in the top, and turn a plunger that fits inside. When you make the plunger leave a slight protrusion on the bottom to identify the center of the disk.</p>	
<p>I pack the conditioned clay into the disk press, adding different colors or patterns,  Pushing the plunger expels the soft clay disk.</p>	
<p>Next, harden the clay by baking it. I use a toaster oven, and bake several disks at a time. The Premo clay should bake at 275F, for 30 minutes, for each 1/4" thickness. My disks are 1/2" thick, so I bake them for one hour. Toaster oven thermostats are notoriously inaccurate. I use an external oven</p>	

thermometer (notice probe in oven) to adjust the oven temperature to 275.

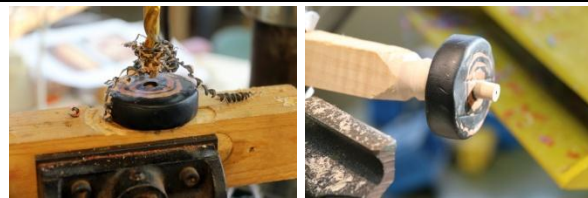
I generally use some type of exotic wood such as, ebony, cocobolo, blood wood, or canary wood for the stems of my tops. The blanks are about 5/8 inch square and about 5" long. Pen blanks work well. I start by securing about an inch of the blank in a spigot jaw chuck.



if you don't have a spigot chuck, drill a 3/8 inch hole in the center of a waste block, turn a 3/8" tendon on the stem blank and glue it into the waste block.] Turn the bottom inch of the stem round where the clay disk will be glued. I've standardized on a 3/8" hole in the clay disk so the bottom of the stem is 3/8".



Drill a 3/8" hole in the disk to match the size of the stem, and glue the disk onto the stem using thick CA glue.



Using a small spindle gouge, turn the bottom of the top



I turn a short shallow curve on the bottom. A low center of gravity helps the top to spin longer.



Before turning the top of the disk and the stem, I support the disk in a cup live center with a piece of folded paper towel between the disk and the center.



Turn the stem of the top using a spindle gouge.



Sand the clay disk with wet or dry sandpaper. Sanding to 600 grit will give you a nice surface. I dip the sandpaper into water and then apply it to the disk.  
Sand the top surface of the clay and the wood stem and part off.



The best spray finish I have found is Krylon Low Odor Finish -- this is a water-based acrylic finish that dries nice and shiny. I put the top upside down in a bottle, spray the bottom - let it dry, and then flip it around and spray the top. An alternative is thin CA glue, applied on the lathe (at LOW speed).



#### Turning the platform -

What finishes off this executive top project is the platform it will spin on. My platforms are 3- 4" in diameter, and have a slightly concave surface so the top migrates to the center when it is spinning. Start with a blank that you have drilled a recess with a 2 or 2 1/8 Fostner bit that the chuck can expand into. First, turn the front surface of the platform.



Then turn it around on a jam chuck to finish the bottom



Put the finish of your choice on the platform and you are finished.

This project makes a fun gift for both children and adults. Place it on your desk and see if the next visitor can resist trying to spin it.

