

Pull-string spinning top

by Rick Rich

Kids of all ages love spinning tops. This pull-string top makes a great stocking stuffer and provides practice on fundamental spindle and faceplate turning skills. Suitable blanks may be in your scrap bin already, and the tools are standard ones you likely have as well, **1** & **2**.

Find the wood

You will need a piece of hardwood 8-1/2" (22cm) long cut 1-3/8" (3.5cm) square; I used straight-grained red oak split from a sawn plank. You will also need a 1/2" (12mm) dowel 8-1/2" (22cm) long. You could turn the dowel yourself or use a store-bought one of red oak, as I did. Last, choose a scrap of 5/8" (1.5cm) thick hardwood board cut 3" (7.5cm) square. You could saw it round, but it's simple and quick to round it on the lathe.

Pull-string top, left, loaded and ready to go. Top right, turned handle and spinning top. Below right, fit the top, insert the string and rewind



1. Tools — From left, scroll chuck, 3/4" (20mm) spindle roughing gouge, 1/2" (12mm) skew, 3/8" (10mm) bowl gouge, froe for splitting straight-grained spindle blank from sawn hardwood board, live center, and drive center.

PROJECT: Pull-string top

Prepare the blanks

The largest blank will be the spindle-turned handle that holds the top while you pull the string. It needs two holes bored to intersect, **2**. One hole is 1/2" (12mm) in diameter and the other is 3/4" (20mm). They are bored at 90° to each other 1-1/2" (3.7cm) from the end of the blank. They need to be straight and true, so take your time and use the drill press if you have one. I used spade bits in a cordless drill, with a small square and a mirror to help me bore straight.

Cut the dowel so one piece is 4-1/2" (11.5cm) long and the other is 4" (10cm). Drill a 1/2" (12mm) hole through the center of the square piece and glue in the longer dowel, leaving about 1" (2.5cm) extending on one side. Give the glue time to dry, which takes longer when the shop and wood are cool. Bore a 1/8" (3mm) hole through the long part of the dowel about 1" (2.5cm) up. Bore a small hole through the other dowel, right in the middle, to anchor the string; this is the puller handle. You can see all the holes in **2**. For a nice touch, countersink the small holes to help the string go in later.

The string is mason's line, available at any hardware store. Cut a piece 24" (60cm) long and put a dab of CA glue on one end to stiffen it. This makes it easier to put through the countersunk holes in the dowels. That's it for prep work, now for the turning.



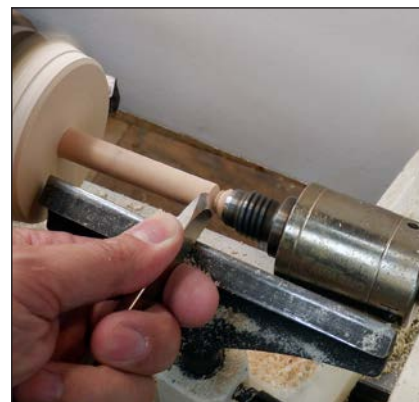
2. Prepared blanks — Bore the spindle blank and dowels as shown, using 3/4" (20mm), 1-1/2" (12mm) and 1/8" (3mm) bits. The wood is red oak (spindle and dowel) and poplar (body of top).



3. Turning the top — With the bowl gouge, cut into the face and toward the headstock.

Turning the top

Start with the top. Some chucks have standard jaws that will clamp down on a 1/2" (12mm) dowel, such as the Oneway Talon in photo **3**. If yours won't, use pin jaws. Put the short end of the exposed dowel into the chuck and bring up the tailstock, then tighten the chuck jaws. I have a revolving center with the center point removed that neatly fits the end of the dowel, so the dowel runs quite true. Another method



4. Skew pares dowel — Clean up the dowel and trim the end.

is to locate exact center of the dowel end and carefully hold it with whatever live center you have, being careful not to split the dowel with the point.

Use a bowl gouge to round the blank and true what will be the top of the top. It is crossgrain, so come at it from the face and slice toward the headstock, **3**. Use the skew to true the dowel—it needs to be a loose fit in the handle—and clean the end of the dowel, **4**. Sand and finish as desired.

PROJECT: Pull-string top



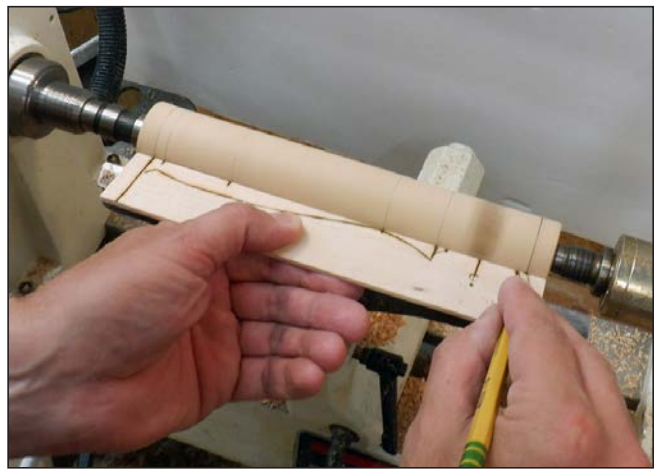
5. Remount — Reverse the workpiece in the chuck to turn the bottom side and spinner point.



6. Completed top — Sand and finish the wood as you go.



7. Handle — Use the spindle roughing gouge to round the handle blank.



8. Story stick — Use it to mark out the handle length and locate the low and high points of your design.

Top, continued...

Now turn it around and grab the long end of the dowel in the chuck. Don't clamp too hard or you will leave marks. You will not need the tailstock, with the top resting against the chuck jaws, **5**. True the bottom and turn the dowel into a blunt point on which the top will spin. Sand and finish as desired, **6**.

Turning the handle

Remove the chuck and install a drive center. Mount the spindle blank between centers and turn round, **7**. I use a story stick because I am making several dozen as Christmas gifts and want them to be the same shape, **8 & 9**. Decide what shape you want your handle to be and turn it, being careful to leave enough wood



9. Turning the handle — Skew chisel pares the curved shapes.



PROJECT: Pull-string top



10. Turning the handle — *The skew chisel easily cuts a long sweeping curve.*



11. Finishing cut — *The red oak handle takes a nice texture straight from the skew chisel.*

Handle, continued...

around the drilled holes for strength, **10** & **11**. Sand, finish, and part. I leave small nibs on the end, and use a small pull saw to cut them off after removing the finished blank from the lathe.

Assembly

Put the glue-hardened end of the string through the puller handle dowel hole and tie a knot on

the other end so it won't keep going through. A little glue on the knot keeps it from unravelling later. Put the top through the 1/2" holes, and push a little bit of string through the hole in the top dowel visible in the 3/4" hole. Wind up the string, pull firmly and lift the handle from the spinning top to watch it go.

Rick Rich is a part-time turner who belongs to Cascade Woodturners in Portland, OR, and South-west Washington Woodturners in Vancouver, WA.

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