Spinning Top

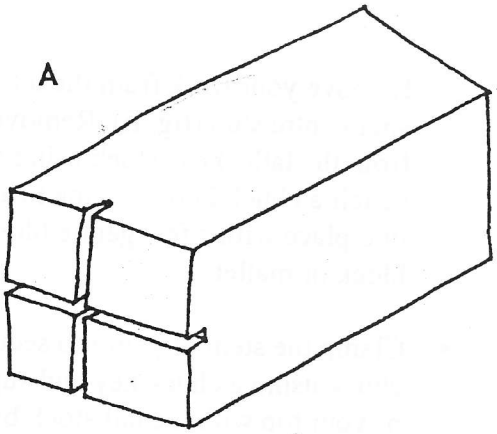
Here are instructions for making a spinning top. There are lots of ways, this is just one. Experiment and have fun. This is a good object to make for your spindle turning exercise (see separate handout).

Method:

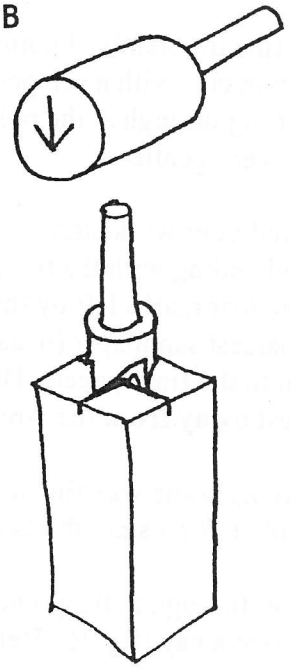
Using the method described in class (a version of which is also found in a separate hand-out) turn a spinning top using a piece of hardwood mounted between centres.

- I suggest you begin with a 2" x 2" piece of hard maple about 6" long. The block does not have to be perfectly square but the more square it is the easier it will be to work.
- Prepare the block by making two saw cuts 1/8" deep at ninety degrees to each other crossing the centre into one end of the work (fig. A). Use the band saw or a hand saw.
- Using a wooden block or a mallet, tap a spur centre into the end of the work with the spurs matching up with the saw cuts (fig. B).
- Mount your work on the lathe by installing the spur centre in the lathe headstock and supporting your block between the spur centre and the tail stock ball bearing centre. Make sure everything is clamped and secure.
- Begin turning using the large roughing gouge. Once the work is a smooth cylinder, switch to scraping tools. Each tool uses a different angle (fig. C). The round nose scraper is most useful. Use heavy cuts to rough out your form. Use lighter and lighter cuts as to approach your final surface. Sharpen your scraping tool, increase the speed of the lathe and take very light final passes leaving the smoothest possible surface. Turn the shape of your spin top leaving a _" diameter stem at least 3" long on the head stock end of your work and a narrow connection to the tail stock at the point of your top (fig. D).

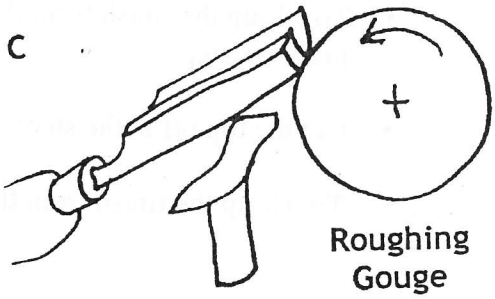
A



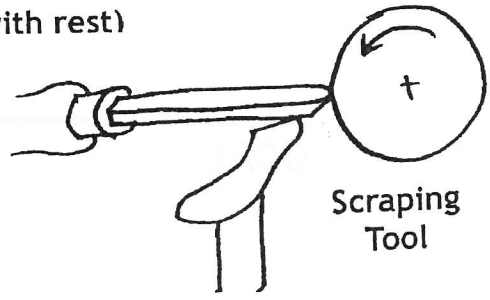
B



C



(Note angle tool makes with rest)



- Remove your work from the lathe and saw off the spur centre stub (fig. E). Remove the spur centre from the lathe head stock using a knock-out bar and install a chuck into the lathe head stock. Knock it into place with a few gentle blows using a wood block or mallet.

- Clamp the stem of your top securely into the lathe chuck using a chuck key and support the other end of your top with the tail stock ball bearing centre (fig. F). Make all clamps secure.

- Refine the stem and point of your top using very gentle cuts with a scraper. Sand your work before cutting through at the point end of your top (fig. G). Be very gentle.

- Sand your work starting with the coarsest papers and ending with the finest. Remove all the scratches and tear marks left by the scraping tool with the coarsest sandpaper (usually 80 grit) before moving on to the finer papers. **Don't forget to take the tool rest away from the work before you sand.**

- Apply some wax finish and, or, colour to your top. Polish for a smooth lustre.

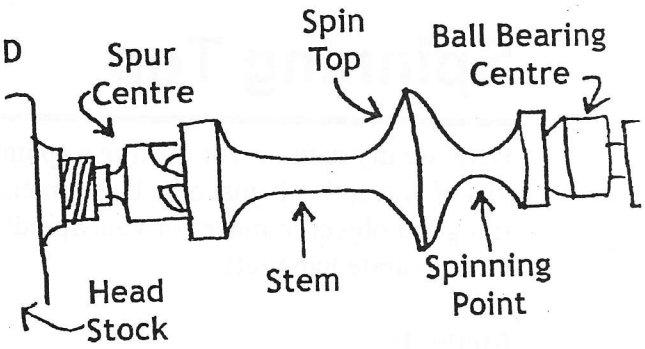
- Cut through at the point of the top and move the tail stock away (fig. H). Refine the point with a scraping tool and sand paper.

- Touch-up the finish from the work done in the previous step.

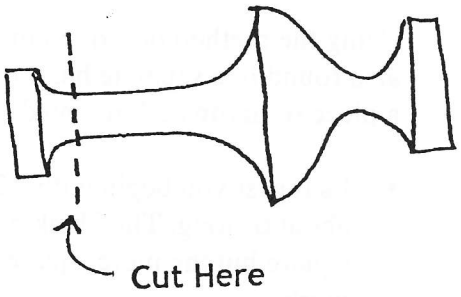
- Cut the top off at the stem.

- Touch-up the finish from the previous step by hand.

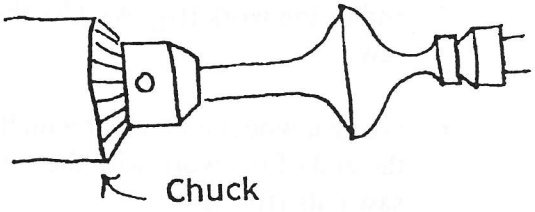
D



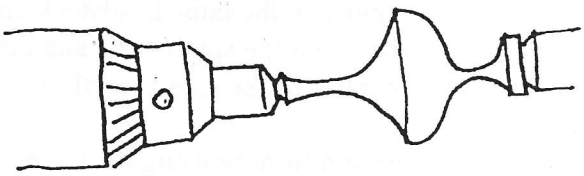
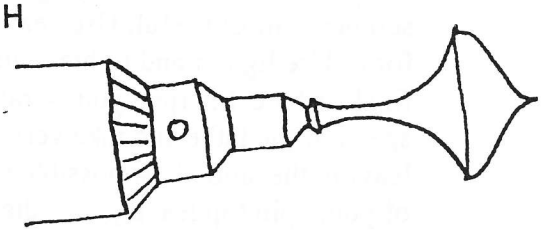
E



F



G



H