



Classic American Style Pencils

Product #123850, 123858

General Instructions

Whether you're a novice turner or a pro, you'll find these projects are all quick and easy to make. Using cut-offs and shorts, the type everyone saves but doesn't know what to do with, you'll find yourself making handsome, custom woodturning projects which are great for gifts or for sale. The following is general in nature, please refer to the instruction sheet on the opposite side for specific dimensions and sizes for your project.

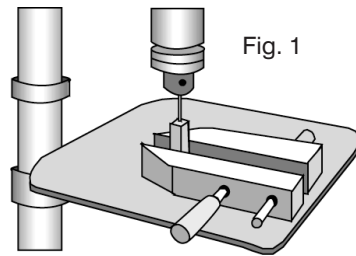
1. Cutting Blanks

Cut wooden blanks to the size specified in the enclosed instructions. For your safety, be sure that the blanks are solid and have no holes, checks or other defects.

2. Drilling Blanks

Center and bore a hole through your stock as specified in the Project Instructions on the opposite side. The center of the blank can be located at the intersection of diagonal lines, drawn from opposite corners. All holes

are easily drilled using a clamp and a drill press (FIG. 1). Before you start to drill be sure that your blank is at 90° to the drill press table. You may also chuck and drill the stock on your lathe.



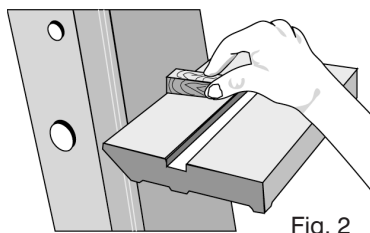
3. Gluing Blanks to Tubes

Rough the brass tube's surface with a fine grit sandpaper and use a quick drying CA type glue to secure the brass tubes into the blanks. Rotate the tube as you insert it to ensure maximum surface coverage of glue. If you find that CA glue is not providing adequate bonding, an alternative is any two part epoxy type glue.

4. Sanding Blanks to Length

Using a belt or disc sander, square the ends of the brass tube/wood blank. The blank should be flush with the brass tube on both ends. Care should be taken to not sand into the tubes (FIG. 2). If any excess glue remains inside the tubes it should be gently scraped out.

Tip: Excess glue can be scraped out using the threaded end of the mandrel when mounting the blanks for turning.



5. Mandrel Preparation

Woodcraft's new Pen and Pencil Maker's Mandrel system allows you to turn a variety of small projects without requiring the purchase of a unique, special mandrel each time. The only item you will need to purchase to turn new projects is the specially designed bushing set for the project of your choice. The mandrel is provided with either a #1 Morse Taper (141468) or a #2 Morse Taper (141469). If you prefer to use the mandrel in a three jaw chuck, simply loosen the Morse Taper set screw and slide the Morse Taper off of the shaft. Now the mandrel shaft may be mounted directly in your three jaw chuck. With the bushing sets specified on the project instruction sheet, mount your wood blanks and bushings as depicted for each project. With the mandrel mounted in your lathe, slide a bushing onto the mandrel, followed by a wood blank and a second bushing or spacer as required, followed by the second wood blank if required. With the wood blanks installed on the mandrel, secure the wood blank/bushing assembly using the washer and retaining nut provided. Bring up a live center in the tailstock to support the threaded end of the mandrel. Do not over tighten the tailstock or the mandrel will flex and bend causing oval shaped turnings.

6. Turning Blanks

Place your tool rest parallel and as close as possible to the blank. Rotate the blank by hand to ensure it will not touch the tool rest when the lathe is turned on. Using a turning speed of approximately 1,000 RPM begin turning the blank to a diameter slightly larger than the bushings. You can work the stock down to just short of the desired design or diameter by carefully scraping or sanding.

7. Finishing the Blanks

Blanks can be finished like any other wood project. Using a fine grit sandpaper, sand the blank until it is flush with the bushing for parallel sided projects or until the desired profile is obtained for custom projects. Use a wood filler, if desired, to fill any grain openings in the blank. Final sanding with a wet/dry paper will create a blank which is glass smooth. *Tip: We have found that use of Micro Mesh sanding paper (11L61) after wet/dry sanding creates a perfect, glass smooth finish.*

8. Assembly

All parts should fit together as depicted in the parts diagram for each project. In some cases a pen press or machinists vise will be needed to completely press the parts together. Protect all plated parts from scratching by covering them with a cloth or thin pad before placing them in a vise. Proceed carefully, many of the kit components are delicate and uneven or excessive pressure will cause permanent damage.



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1. Cutting Blanks

Cut 2 blanks $\frac{5}{8}$ " x $\frac{5}{8}$ " x $2\frac{1}{8}$ " long.

2. Drilling Blanks

Using a letter "O" brad point or pen maker's bit, drill a hole lengthwise through the center of each blank. If the bored hole is slightly larger than the brass tubes you can use two part epoxy (available at any hardware store) as a gap filler when gluing the brass tubes into the blanks. See General Instructions for more information.

3. Gluing Blanks to Tubes

See General Instructions for details.

4. Sanding Blanks to Length

Prepare as described in the General Instructions. Ensure that the ends of each blank are squared off and that none of the brass tube is sanded or scraped away during this process. *The Classic American Pencil will not function properly if the ends of the blanks are not square or if the tubes have been shortened!*

5. Mandrel Preparation

Mount the tube blanks on the lathe mandrel and turn to bushing dimensions. All three bushings are identical, but proper placement will enable you to turn to dimensions required for the pen top and bottom. Place the first bushing on the mandrel with the "large" diameter on the headstock side of the mandrel. Slide a blank onto the mandrel and over the lip of the first bushing. Place a second bushing on the mandrel with the "small" diameter oriented toward the headstock and slip the bushing lip into the blank. Place the second blank on the mandrel, followed by the third bushing with the "large" diameter oriented toward the headstock. In this configuration, the blank closest to the headstock (Tube #1) is the pencil bottom and the blank closest to the tailstock (Tube #2) is the pencil top.

Tip: Mark or identify your bushings so that you can use them in the same mandrel position each time and avoid damaging the bushing lip when the washer and mandrel nut are tightened.

See General Instructions for details.

6. Turning the Blanks

See General Instructions for details. The diameter of each blank must exactly match the respective bushing diameter. If the proper diameters are not achieved, the pencil may rub or bind and not function properly when assembled. A portion of the wood on the pencil top, Tube #2, must be parted off down to the brass tube prior to assembly. Measure a distance $\frac{1}{8}$ " from the point where Tube #2 meets the bushing and part this $\frac{1}{8}$ " section of material from the brass tube. Be careful not to damage the brass tube and if necessary clean any remaining wood/glue from the tube by hand prior to pencil assembly.

7. Finishing the Blanks

See General Instructions for details.

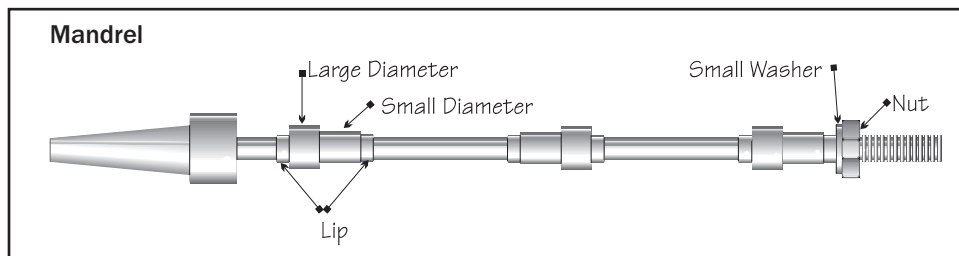
8. Assembly

Pencil Bottom Assembly

1. Slide the gold ring (C) over the opposite "stud" end of the black tip center (B). Press this entire assembly into one end of Tube #1 (D).
2. Press the center stabilizer ring (E) into the other end of Tube #1 (D).
3. Slip the lead mechanism (F) through the top end of Tube #1 (D) and screw the gold tip (A) onto the lead mechanism. The gold tip should be finger tightened only.

Pencil Top Assembly

1. There are (2) tubes which are used in the assembly of the Classic American style pencil top, the larger outer tube already glued into the top blank and a smaller diameter "inner" tube, Tube #3 (K). Press the beveled end of the brass clip bushing (L) into either end of the **smaller "inner" tube, Tube #3 (K)**, so that the bushing is flush with the end of the tube. Be careful not to damage or crush the tube during this process.
2. The center ring consists of three pieces as shown in the parts diagram. Slip the small, black plastic ring (H2) on the main center





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- component (H1), followed by the small gold ring (H3). It may be necessary to press these three pieces together. The three piece assembly now becomes the Center Ring (H).
3. Press the Center Ring (H) onto the brass, parted end of the pencil top, Tube #2 (J), so that the flat side of the center ring is flush against the wood of Tube #2. If the center ring is loose, we recommend carefully gluing it into place with CA glue.
 4. Slide the small, "inner" tube, Tube #3 (K) into the center ring/pencil top assembly so that the bushing end of Tube #3 is flush with the end of pencil top. The fit will be a tight, snug one and a press fit may be required to achieve a flush fit.
 5. Insert the threaded end of the finial (N) through the hole in the clip (M) and screw this assembly into the top of the brass clip bushing (L), finger tight.
 6. Slip the pencil top over the exposed portion of the lead mechanism. Check the area where the center ring (H) slips over the pencil bottom. Any interference here will cause the pencil to rub or bind when twisted to advance the lead. With proper clearance you should be able to see a slight gap around the entire circumference of the pencil where the top overlaps the bottom. A careful scraping action can be used to "shave" some wood from the end of the pencil bottom and create this clearance if necessary.

9. Operation and Lead Replacement

1. Push the pencil top onto the exposed portion of the lead mechanism (F). Turn the top clockwise until the lead is advanced about 1/8" out of the tip.
2. To replace the lead, insert a piece of lead into the gold tip (A) and rotate the lead mechanism counter clockwise so that only 1/8" of lead extends through the tip. Press the exposed portion of lead against a solid surface to "seat" the lead in the lead mechanism. Turn the lead mechanism clockwise to advance the lead.

Replacement Classic American Pencil Tubes 123866 5 pair

