



## Classic American Click Pen

Product #146598, 146599

### 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.

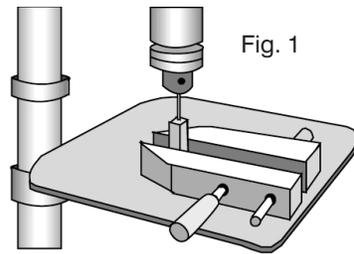
#### 1. Cutting Blanks

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.

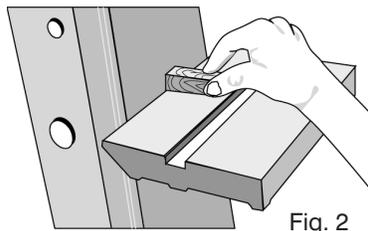


#### 3. Gluing Blanks to Tubes

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.



### 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 wood blanks, one  $\frac{5}{8}$ " x  $\frac{5}{8}$ " x  $1\frac{7}{8}$ " for the lower barrel (tube #1), and one  $\frac{5}{8}$ " x  $\frac{5}{8}$ " x  $2\frac{3}{16}$ " for the upper barrel (tube #2).

### 2. Drilling Blanks

Using a letter "O" brad point bit drill a hole lengthwise through the center of the shorter blank (tube #1). Using an 11mm brad point bit drill a hole lengthwise through the center of the longest blank (tube #2).

### 3. Gluing Blanks to Tubes

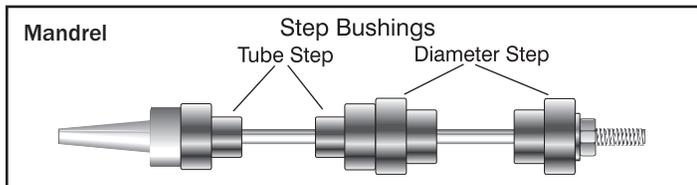
See General Instructions for details.

### 4. Sanding Blanks to Length

See General Instructions for details.

### 5. Mandrel Preparation

The bushing set for this pen contains four bushings, two small diameter and two large diameter. Slide a small diameter bushing onto the mandrel with the lip facing the tailstock, followed by the shorter blank/tube #1, making sure the lip on the bushing seats inside the tube. Place the second small diameter bushing on the mandrel, lip end first, and again make sure the lip seats inside the tube. Slide a large diameter bushing onto the mandrel with the lip end facing the tail stock, followed by the longer blank/tube #2, then the last large diameter bushing lip end first. Secure the entire assembly on the mandrel with the washer and nut.



### 6. Turning the Blanks

The diameter of the lower barrel, tube #1, must exactly match the bushing diameter. If this diameter is not precisely obtained, the wood of Tube #1 will rub or bind on the pen's center ring when assembled and your pen will not operate properly. A portion of the wood on the pen top, tube #2, must be parted off for pen assembly. Measure and mark a distance of  $1\frac{13}{16}$ " along the pen top blank, from the point where the wood meets the bushing which is closest to the tailstock toward the headstock. This  $1\frac{13}{16}$ " will be the wood **left after parting**. Part off the approximately  $\frac{1}{4}$ " of wood between the mark you made in the last step and the bushing. Be careful not to damage the brass tube and if necessary clean any remaining wood/glue from the tube by hand prior to pen assembly.

### 7. Finishing the Barrels

See General Instructions for details.

### 8. Assembly

1. Press the Nib Assembly (A) into one end of the smaller diameter tube #1 (B). Press the smooth non-threaded end of the Center connector (C) into the opposite end of the same tube #1.
2. The Center Ring Assembly (D) consists of three pieces as shown in the parts diagram. Slip the black ring (D2) followed by the gold ring (D3) onto the main center ring component (D1). Press this assembly, loose ring end first, onto the brass portion of tube #2 from which the wood was parted.
3. Press the Click Mechanism, Pocket Clip, Cap assembly (F) into the opposite end of tube #2 (E).
4. Slide the Spring (H) onto the small end of the Ink Refill (G). Slide the spring/ink refill assembly into the lower barrel tube #1, spring end first.
5. Screw the assembled upper barrel onto the lower barrel.

