

Making Laminated Happy Face Pens ... by W. H. Kloepping

To start with, you will need a **SQUARE** pen blank (e.g. 3/4"x3/4"). All sides must be parallel and square to each other or the image will be canted and may not look good.

1. On the square pen blank, draw a line down the CENTERLINE of all 4 sides of the pen blank. (Note, if you will only be putting a happy face on one side of the pen then you only need to do this on two adjacent sides)
2. Estimate how WIDE your pen will be when finished and draw 2 lines centered around the centerline drawn in previous step that approximates the final dimensions of the pen. Do this on all 4 sides of the pen blank (Again, if you are only putting a happy face on one side of the pen then you only need to do this on two adjacent sides)
3. Determine where the CENTER of the happy face will be and draw a line across the pen blank perpendicular to the centerline at the location of the center of the happy face.

Figure 1 shows what the blank will look like after steps 1-3.

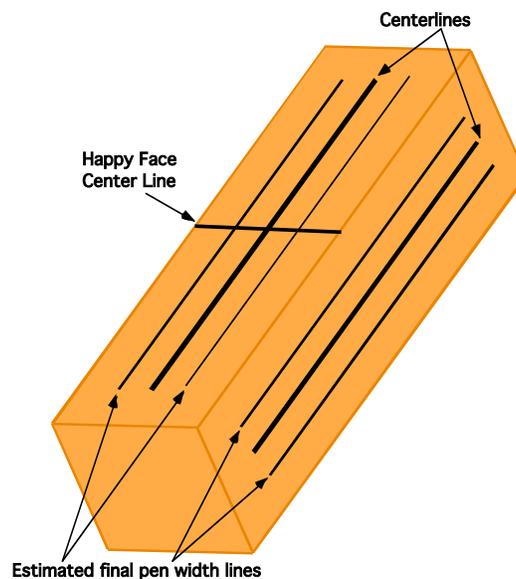


Figure 1 – Pen Blank after Steps 1-3.

4. Using a rounded corner jig (e.g. a Quick Corner jig or similar device for drawing rounded corners), set the back of the curved corner on, or nearly on, the CENTERLINE and align the corner jig so that the resulting curve will be symmetrically centered around the line where you want the center of the happy face to be.

Note that the size of the rounded corner to use should be approximately the same as the WIDTH of the final turned pen dimension. I have had good luck using a 1/2" rounded corner jig. Figure 2 shows the rounded corner curve drawn on the blank.

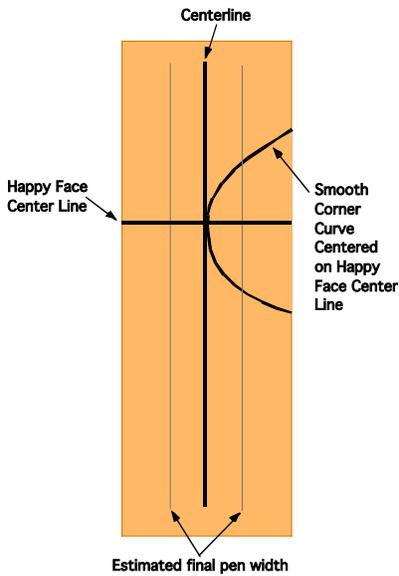


Figure 2 – Rounded Corner Curve drawn on the blank

5. Measure the WIDTH of the corner curve at the EDGE of the blank and put TWO MARKS at the edge of the blank that are approximately 1/3 of the way from the ends of the corner curve. Figure 3 shows the location of these marks.

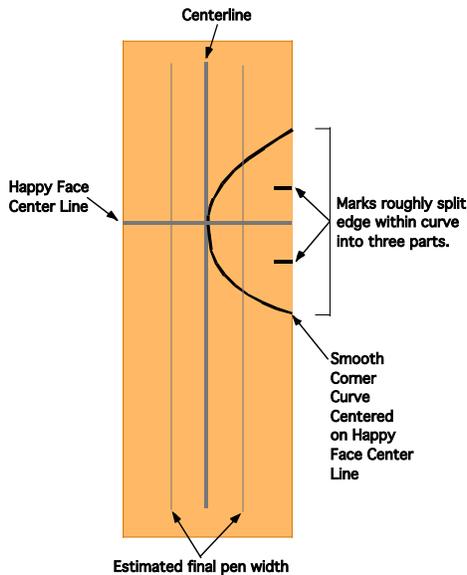


Figure 3 – Marks 1/3 of the way from each end of the edges of the corner curve

6. At the mark that is closest to the BOTTOM of the happy face DRAW a 45 degree line from the EDGE of the blank to a point approximately midway between the centerline and the final pen width line closest to the mark. This is the mouth line and should point towards the CENTER/TOP of the happy face. Figure 4 shows the 45 degree mouth line.

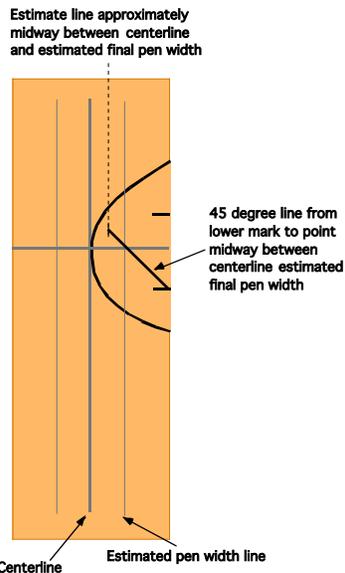


Figure 4 – 45 Degree Mouth Line.

NOTE: These directions result in a happy face. For a frowny face you will need to reverse the angle of the line and start it closer to the middle of the happy face instead of starting at the lower edge mark. No figure is provided for a frowny face setup.

7. At the UPPER edge mark, draw a line across the ADJACENT face (that have the centerline and pen dimension lines drawn on it). Figure 5 shows this line.

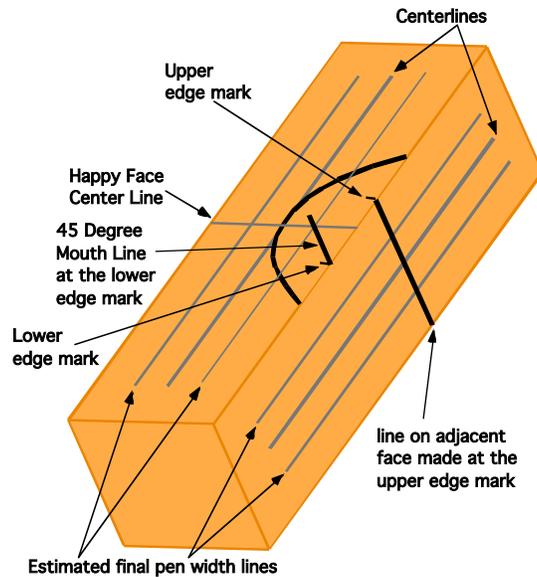


Figure 5 – Line on Adjacent Face at edge mark.

8. On the adjacent face, put two dots on the line just drawn with one dot to the LEFT of the CENTERLINE and one dot to the RIGHT of the CENTERLINE. Position each dot to be midway between the CENTERLINE and the final pen dimension line. These dots will be the location of the eyes. Figure 6 shows the position of the eye dots.

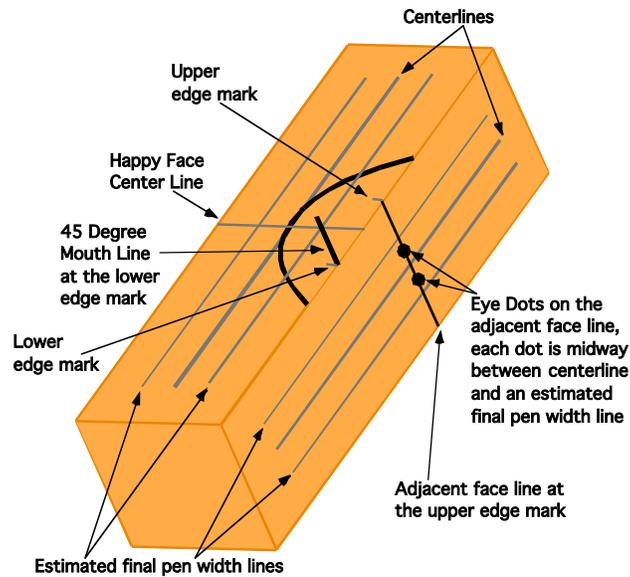


Figure 6 – Eye Dots on Adjacent side.

Figure 7 shows the relative location of the curved face line, mouth line and eye dots on the blank (with all of the measurement/alignment lines removed) prior to cutting and laminating the blank. These are the only lines(dots) that will be cut (drilled).

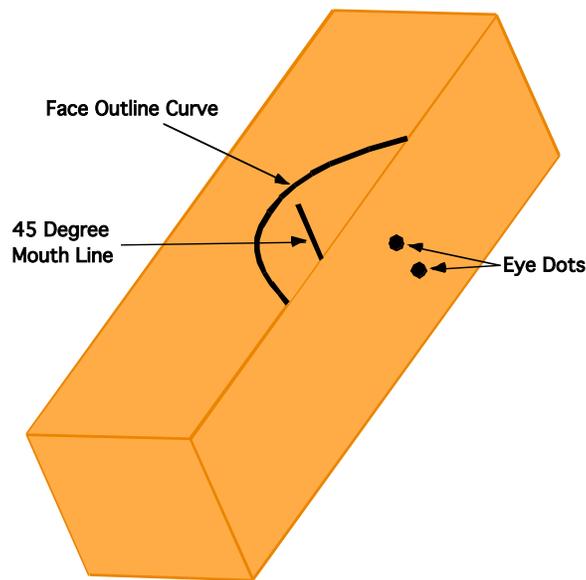


Figure 7 – Lines and dots that will be cut or drilled

9. Using a scroll saw (or band saw), CUT along the 45 degree mouth line. Be sure to stop the cut BEFORE you get to the CENTERLINE (or face outline curve).

10. After the 45 degree line has been cut, CUT along the CORNER CURVE line (the face outline), cut along the entire length of the line and separate the two pieces.

11. **SQUARE** the end of a piece of veneer that is the same width or wider than the pen blank and **GLUE** the veneer into the 45 degree slot (mouth slot) cut in step 9. Be sure to push the veneer **ALL THE WAY** to the back of the slot. Note that the veneer should be thinner than the width of the blade used to cut the slot or you will have difficulty pushing the veneer into the slot.

12. Sandwich a piece of veneer between the main blank and the face outline piece cut out in step 10. and **GLUE** the pieces back together. Make sure you coat all surfaces (including both sides of the veneer) with a generous amount of glue.

Note: if your veneer is too stiff to bend without breaking you can soak it in water for a while to soften it up and make it more pliable and then clamp the veneer between the pieces overnight and let it dry before gluing.

13. Make sure the two pieces are well aligned to each other (along both sides as well as along the face) and **CLAMP** the pieces together (with veneer in between) and let them dry completely (overnight is good).

14. After the glue has dried, use a **DRILLPRESS** to **DRILL** 1/8" diameter holes at the two dots drawn in step 8. The holes should be drilled **NO DEEPER** than the **CENTERLINE** of the blank (set the drillpress stop so you don't go deeper than the centerline).

15. Shred a small amount of extra veneer material into pieces narrower than 1/8". Dip the end of a splinter of veneer in glue and put it into one of the drilled holes. Be sure to push it as far into the hole as possible.

16. Continue stuffing glued splinters into the hole until you can't get any more splinters in. Repeat the process for the other hole.

17. When you've stuffed the hole with as many veneered splinters as you can, take a pointed tool (like an awl or small nail set) and jam it into the hole to compact the splinters as much as possible.

18. The happy face blank preparation is complete once both holes have been filled and packed with veneer splinters and the glue has dried.

19. If you want a second happy face on the other side of the blank, repeat the above process for the opposite side of the blank.

NOTE: If you repeat the process at the same height on an adjacent side the 2 happy faces will overlap and may not look very good. To put a happy face on an adjacent side you should offset the faces so they don't overlap.

Figure 8 shows what the blank should look like after the blank preparation for the laminated happy face has been completed.

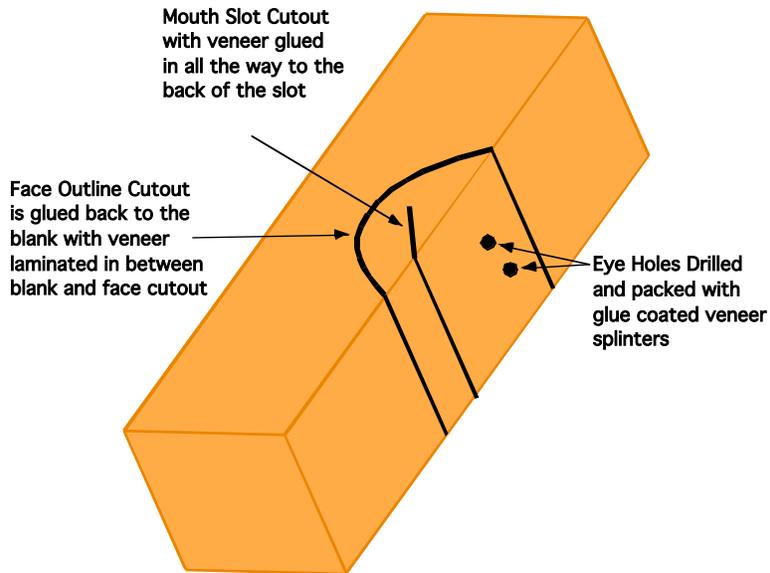


Figure 8 – The completed happy face blank preparation.

20. Put the blank in a CENTERING VISE THAT HAS BEEN CAREFULLY CENTERED TO THE DRILL and drill the center hole. If the hole is not drilled along the central axis of the blank the happy face will be distorted and/or misaligned.

21. After drilling the blank, finish making the pen/pencil as you normally would. Stopping the lathe from time to time during turning will help you gauge how thick or thin you can make the pen and still have a good looking happy face.

NOTES:

The veneer can get ripped out of the mouth and/or eye holes if you do not use enough glue or don't get the veneer pushed all the way to the bottom of the slot or hole. Make sure the veneer fills all of the gaps, use lots of glue during assembly and let glue dry completely before turning.

If the corner curve (face outline) is too open or too severe with respect to the final dimension of your pen you may end up turning the face circle down so small that the eyes end up outside the face or the mouth touches the eyes, etc. You'll need to consider the relationship between all of the elements of the happy face if you start altering the positions of the various features.

Placement, depth and angle of the mouth slot and eye holes can be modified for different effects. The relative position of the mouth to the eye holes will change as the pen is turned down. The final pen profile and thickness will affect the look of the face. If you have problems getting the eyes and mouth to line up nicely you might consider altering the placement and depth of the mouth slot and eye holes from these guidelines.

Happy Happy Face turning!