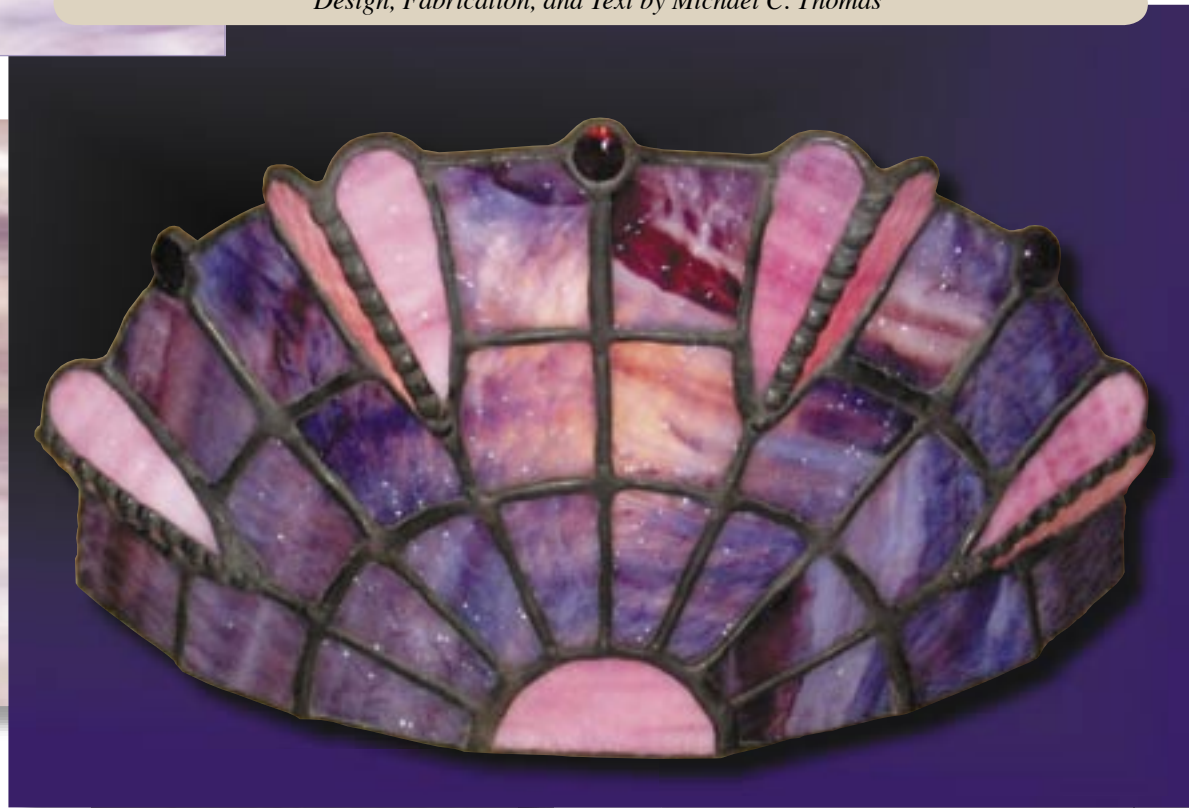


Baseless Conical Fan Lamp

Design, Fabrication, and Text by Michael C. Thomas



Although a plain title, Baseless Conical Fan Lamp is highly descriptive of this piece. The lamp does not require a fan lamp base. It is a Tiffany-style shade assembled on a do-it-yourself poster board form. The form, a cone, is ideal for small-scale stained glass pattern making. (For you gifted geometry scholars, the form is actually a frustum of a right circular cone.) The spider for this lamp is also easily constructed with short segments of brass rod and copper wire.

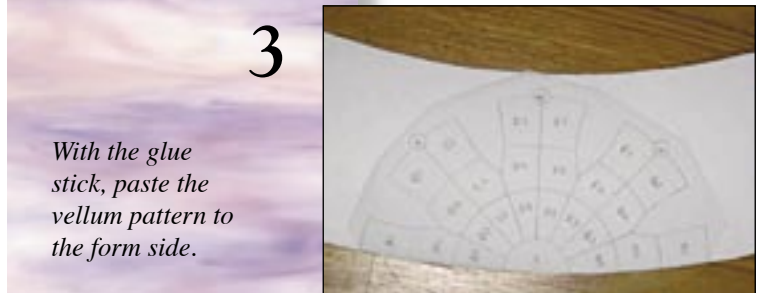
Wissmach Glass Co.
 7DG Pink/White Streaky Granite
Kokomo Opalescent Glass
 249G Purple/Blue Streaky Granite
Tools and Materials
 7/16"-Diameter Amethyst Nuggets (3)
 Plain Vellum (2 Sq. Ft.) Poster Board (28" x 22")
 Masking Tape Stapler Glue Stick
 Double-Sided Cellophane Tape
 7/32" Copper Foil Flux 50/50 Solder 63/37 Solder
 Black Patina 12-Gauge Copper Wire (4")
 1/16"-Diameter Brass Rod
 (two 1-1/2" lengths and one 7/8" length)
 22-Gauge Copper Wire Clip-In Socket



1 Trace the form side, tab, top, and bottom onto poster board.



2 Cut the form pieces out of the poster board and trace the shade pattern onto vellum.



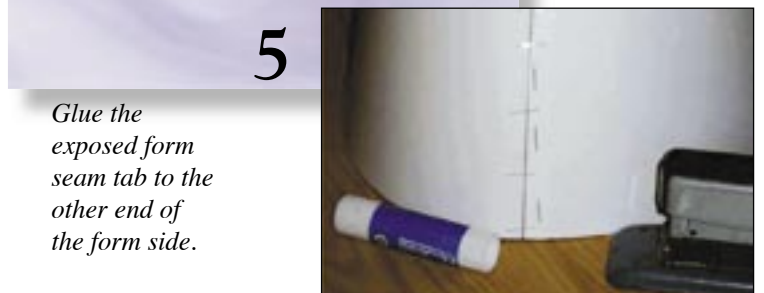
3 With the glue stick, paste the vellum pattern to the form side.

Align the bottom of the shade with the bottom edge of the form side.



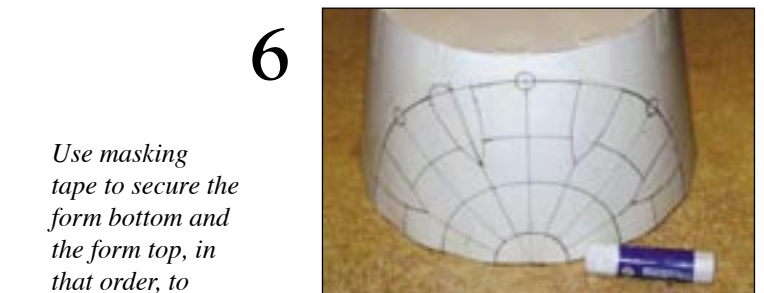
4 Paste the form seam tab to the end of the form, leaving half of the tab exposed.

Use staples to secure the form seam tab. Let the glue dry.



5 Glue the exposed form seam tab to the other end of the form side.

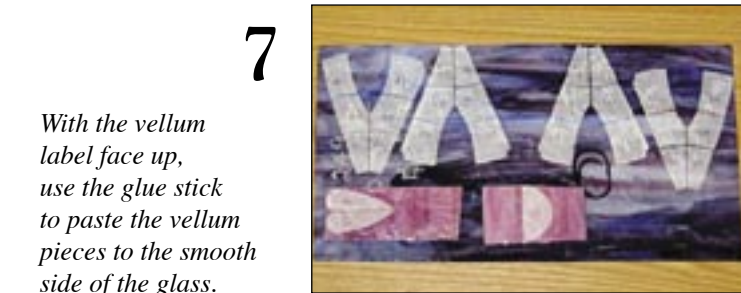
Secure it with staples and let the glue dry.



6 Use masking tape to secure the form bottom and the form top, in that order, to the form side.

Place double-sided cellophane on the vellum pattern that you glued to the form earlier. Be sure that every pattern piece has some portion of tape on it, since the tape will secure the glass pieces to the form. Then trace the shade pattern onto another piece of vellum. Make four copies each of pieces P and Q.

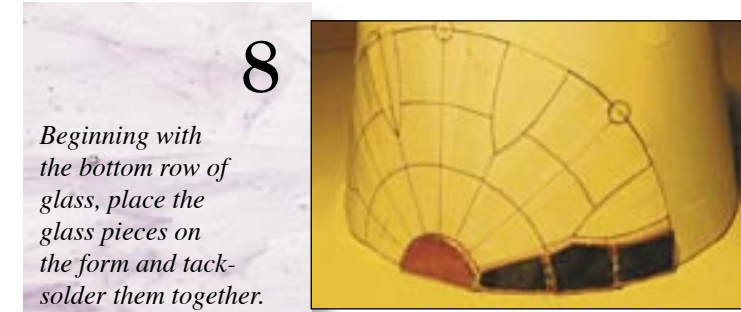
With foil pattern shears, cut the pattern lines in the direction of the arrow heads. With regular scissors, cut the seams without arrow heads. Label the vellum pattern pieces on the backside of the vellum.



7 With the vellum label face up, use the glue stick to paste the vellum pieces to the smooth side of the glass.

Arrange the vellum pieces so the glass grain flows in a consistent direction. I elected to have the grain flow left to right across the pieces, but you may elect up and down. Just be consistent throughout all of the pieces.

Score, break, and grind the glass pieces. Soak the glass pieces in warm water for a few minutes. Separate the vellum from the glass and place the vellum and glass next to each other on a towel to dry. Be sure to remove any glue residue from the glass. Once the glass is dry, transfer the vellum label to the glass with a Sharpie. You can then discard the vellum and foil the glass.



8 Beginning with the bottom row of glass, place the glass pieces on the form and tack-solder them together.

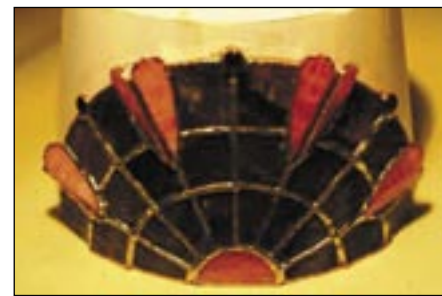


9 Continue tack-soldering the additional glass pieces, reserving the spaces for the P and Q pieces and the nuggets for last.



10 Place a P/Q piece, viewing side down, on the work surface and tack-solder the pair together, ever so slightly, at approximately a 120-degree angle.

11



Place the P/Q pair in position on the form, tack-solder it into position, and repeat for the other P/Q pairs.

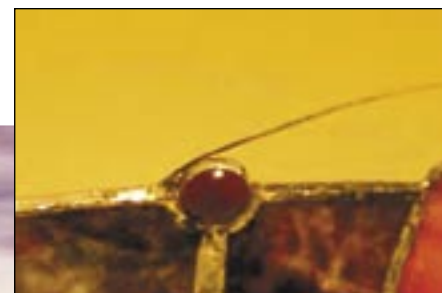
Tack-solder the nuggets in position. Solder all of the seams on the viewing side of the shade to structurally stabilize the shade. This is not a final bead.

12



Carefully remove the shade from the form and structurally stabilize the shade's inside face with solder.

13



Add 22-gauge wire around the perimeter edge of the shade.

14



Make a final bead.

Remember to position the seams horizontally in order to obtain a well-rounded bead, using a cardboard box stuffed with newspaper if necessary. Use 63/37 solder on the wide P/Q seams, first making a well-rounded final bead. After the solder has cooled, place dots of solder on the seam.

Tin the brass rods, which will be the spider arms. The 1.5"-long rods are the left and right arms, and the 7/8"-long rod is the center arm.

15



Wrap a 12-gauge copper wire around a 1"-diameter dowel to create a wire ring.

Cut the wire, solder the ends together, and tin the entire wire.

16



Using the spider sketch on the pattern, place the wire ring on the circle.

Solder the left and right spider arms to the ring along the line segments on the sketch.

17



Solder the left and right spider arms to the shade at the left and right attachment points.

These points are marked with triangles on the pattern.

18



Solder the 7/8"-long brass rod between the center attachment points on the ring.

The spider is now complete. It's now time to clean, patina, clean again, and polish the shade.

19



In the spider, install a clip-in, candelabra-base socket that includes a cord and line switch.

Finish off the lamp by installing a 25-watt bulb and enjoy the lamp's beautiful glow.

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Michael C. Thomas received his mom's stained glass tools and supplies from the 1970s during the 1996 Christmas holiday. The next month he took a stained glass course at the local United States Army installation and fell in love with stained glass lamps and the warmth with which they filled a room.

Some of Michael's vase caps were ill-fitting on his early lampshades, so he got out his high school geometry text book and also applied some mapping techniques from his college days. The results were the Microsoft Excel algorithms that calculate the dimensions of panel lampshades. Now he teaches those methods in his stained glass classes and has recorded them on a CD. In his paperless book, Copper Foil Panel and Tiffany Style Lamp Making—Plus 3-D Panel Projects, he also discusses unique methods in pattern making using vellum and the lamp panel sandwich flipping technique. There is a free PDF download of the first three chapters in the "Supply Room" at www.stainedglassunl.com.

