

Light AND Shadow

by Elizabeth Paley

Holes enrich surfaces by adding absence. I play with this compelling contradiction on a small scale by making pierced tealight holders and nightlights—objects designed to frame light within while casting mesmerizing shadows.

Light Sources and Considerations (A)

Illuminate tealight holders with wax candles or LED tealights. Wax candles produce bright, warm, animated light, but the flame poses potential fire and burn hazards. Battery-powered

LED tealights avoid these hazards and last longer, but their light is neither as bright nor as warm.

Because you cannot control the type of tealights users select, ensure that your holders can safely house wax candles. Prevent burns by incorporating a flue in the cover, so that the flame does not sit directly under any ceramic. Include a rimmed saucer to hold the candle and catch potential wax spills.

Illuminate nightlights with a low-wattage (5–7.5W) candelabra bulb screwed into an electrical cord with an in-line switch and a





Opposite page and above: Tealight holder (unlit and lit), 3 in. (8 cm) in height, wheel-thrown and pierced white stoneware, glaze, fired to cone 6 in oxidation, 2021. **A** Light sources: wax-candle tealight, LED tealight, and candelabra bulb screwed into an electrical cord with an in-line switch and a clip-in socket. **B** A sampling of hole-cutting tools (left to right): X-Acto knife, Fiskars fingertip detail knife, an assortment of Kemper round hole cutters (minus handles), Kemper multi drill tool, van Gilder hole cutter, Kemper square hole cutter.

clip-in socket. Because bulbs and socket clips vary in size, have these parts (or their measurements) on hand when making the nightlight, to ensure a good fit.

Hole-Cutting Tools (B)

An assortment of tools can be used to cut holes in clay, from ordinary drill bits to brass tubes with diagonally cut tips and other cutters designed specifically for pottery. To cut round holes, I primarily use Kemper $\frac{3}{16}$ -, $\frac{1}{4}$ -, and $\frac{5}{16}$ -inch hole cutters. **Tip:** To make more complex forms with holes in narrow spaces, remove the wooden handles and use the brass tubes by themselves (B). To cut shapes freehand, I use a Fiskars fingertip detail knife or an X-Acto knife.

Throw Tealight Holders Off the Hump

Tealight holders require about $\frac{1}{2}$ pound of clay each, including cover and saucer. Throw them off the hump rather than directly on the wheel head.

Begin by roughly centering a few pounds of clay. At the top of the hump, cone up and center about $\frac{1}{2}$ pound of clay. Open this centered portion 2½–3 inches in diameter (1). Pull the wall out, up, and inward to form an onion-shaped dome with a flue 1–1½ inches across (2). Repeat pulls, refining the form and making the

walls as evenly thin as possible. (There's no better lesson on the evenness of your walls than to cut a hundred holes in your form from top to bottom!) Smooth the form with a rib (3), then use a needle tool to mark a groove around the bottom of the cover (4). Stop the wheel and fit a thin, flexible wire or a piece of dental floss into the groove; I use a Dirty Girls thin cut-off wire for this. Holding one end of the wire in place, pull the other end through the clay, following the groove (5). This should yield a relatively level cut that requires minimal refining later. Set the cover aside until leather hard.

Next, throw a saucer. As a guide for size, use the footprint left behind on the hump by the wired-off cover. Pull the edge out until the saucer is wide enough to hold the cover, then add a slight lip to contain potential wax spills. Wire the saucer off the hump (6), and set aside until leather hard.

Alternate throwing covers and saucers until the entire lump of clay is used.

Throw Nightlights

To throw a nightlight as a single, closed form, center a pound of clay on the wheel head. Open to a diameter at least as wide as the combined length of the bulb and socket, and compress the bottom.



1 Cone up and center $\frac{1}{2}$ pound of clay, then open it 2½–3 inches in diameter.



2 Pull the wall out, up, and inward to form an onion-shaped dome.



3 Form a flue 1–1½ inches in diameter, then use a rib to smooth the surface.



4 Use a needle tool to mark a groove around the bottom of the cover.



5 Pull a thin flexible wire through the clay, following the marked line.



6 Throw a saucer off the hump and add a lip. Cut under the saucer with a wire tool.



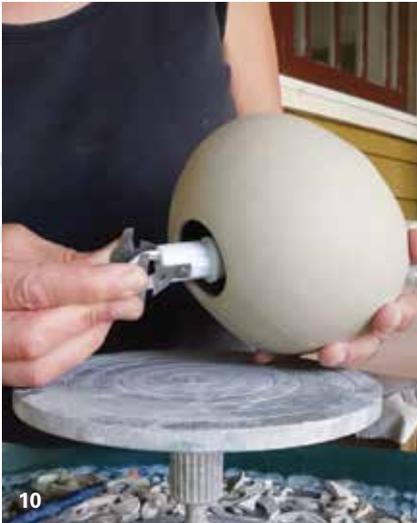
7 For a nightlight, the diameter halfway up should be 1½–2 inches wider than the combined length of the bulb and socket.



8 End each pull by guiding the clay inward until the form can be pinched closed at the top.



9 Compress the exterior with a rubber rib. Use the tip of a wooden rib to remove excess clay from the base.



10 Prepare nightlights by cutting a hole at the base for the socket to clip into.



11 Begin piercing tealight covers along the top, where the clay dries fastest.



12 After carving the entire form, smooth the surface with a moist sponge.



13 Allow cut leaf pieces to remain in place until all incisions are completed.



14 Compress seed cracks (circled in red) to prevent cracks from spreading.



15 Cut leaves, then vines and stems, then more leaves, moving from top to base.



16 Leave an uncut rim around the bottom. When the leaf-and-vine design is complete, gently remove the cuts.



17 Slip, score, and reconnect parts of a break; add a small coil if necessary. Compress seed cracks with a damp brush.



18 Dip the covers in glaze quickly to prevent oversaturating the bisque-fired clay. Fully dry the glazed form before firing again.



Above left: Nightlight, 3¾ in. (10 cm) in height, fired to cone 6 in oxidation, 2021. **Above right:** Double-walled bowl, 4½ in. (12 cm) in height, fired to cone 7 in reduction, 2020. **Both images:** Wheel-thrown and pierced white stoneware with glaze.

Over several pulls, guide the wall out, up, and inward to create an onion-shaped dome (7). The diameter about halfway up should eventually be at least 1½–2 inches wider than the combined length of bulb plus socket, so that the bulb will not butt up against the wall of the fired cover.

End each pull by guiding (or collaring) the clay inward, until the clay can be pinched closed at the top (8). Compress the exterior with a rib; the air inside will provide counter-pressure as you refine the form (9).

Use the pointed end of a wooden rib to remove excess clay from the base. Wire the nightlight off the wheel head and set aside. Poke a small hole in the form with a needle tool to allow moist air to escape, then dry until leather hard.

Carve the Covers

Prepare leather-hard tealight covers for carving by cutting away any excess clay at the bottom and smoothing the edge with a sponge.

Prepare nightlights by cutting a hole at the base for the socket to clip into (10). Have the socket and bulb on hand to confirm hole size, and remember to account for clay shrinkage. Socket wings can be bent outward to accommodate a hole that is slightly too large, but little can be done to fit a socket into a too-small hole once the clay has been fired.

When planning surface designs, consider the appearance of the cover itself as well as the shadows it will cast. Small holes help conceal the light source and protect candle flames from wind, while groupings of small holes cast more dynamic shadows than a single hole of the same total area.

Descriptions of three freehand designs follow, progressing from the most forgiving to the most fragile (until fired).

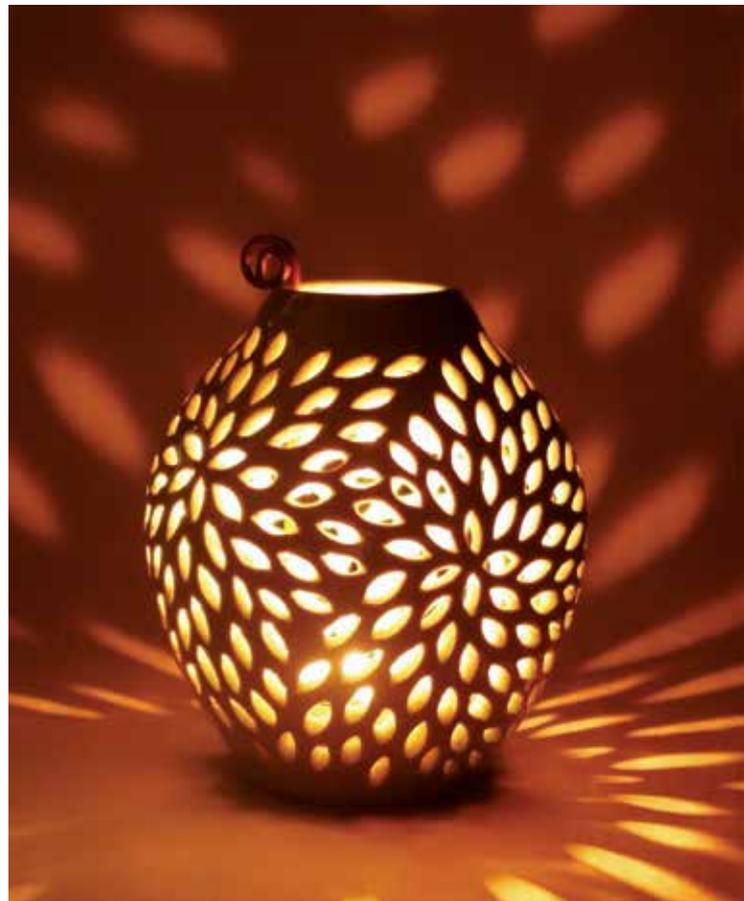
Design 1: Round Holes

Pierce round holes by inserting your chosen hole-cutting tool through the clay with a gentle twist. Begin along the top of the flue, where the clay dries fastest, and proceed downward (11). If the clay is too soft to easily remove the cut pieces, let the cover dry a little longer before proceeding. Continue piercing until you are satisfied with the design. Smooth the surface inside and out using a moist sponge (12).

Design 2: Leaves

Use a craft knife to make leaf shapes by cutting adjacent concave and convex curves. Allow cut pieces to remain in place until all incisions are completed (13); this provides physical support for further cuts, reduces breakage, and slows drying.

Remove the cut pieces with a craft knife or needle tool. Incisions that extend beyond the acute-angled tips of the leaves (see red circled area in 14) can trigger fractures in the cover once the



Above left: Pierced vase, 6¼ in. (16 cm) in height, wheel-thrown and pierced white stoneware, glaze, fired to cone 7 in reduction, copper wire tealight cradle, 2020. **Above right:** Pierced vase with lit tealight.

clay is bone dry. Remove these seed cracks by compressing with a damp paintbrush while the clay is still leather hard. Smooth the surface inside and out using a moist sponge.

Design 3: Leaves and Vines

Begin this design by cutting a row of evenly spaced leaves around the flue. Allow cut pieces to remain in place until all cuts are completed.

Cut a second and third row of leaves below the first, positioned so that the upper tip of each new leaf points into the curved side of a leaf above it; this proximity will help create an integrated, well-supported network of leaves.

Begin outlining vines and stems: starting with the top row, cut a border along the right side of a leaf; continue this border along the right side of the adjacent leaf below, then extend the cut rightward to start a short stem. Incise a second border along the left side of the neighboring top-row leaf. Continue this border downward to start defining a vine that joins up with the stem. Finally, cut a line that joins the tops of the previous two cuts.

Repeat this outlining process around the rest of the top row, then outline the corresponding spaces between the second and third rows (15). Add a fourth row of leaves below the third, then outline again. Continue adding leaves and outlining vines until you reach the bottom of the cover. Leave an uncut ring of clay at the bottom.

Once the design is complete, use the craft knife or a needle tool to gently remove the cut pieces (16). Immediately repair any breaks by gently slipping, scoring, and reconnecting parts; add a small clay coil if necessary to reinforce the repair, then smooth with a paintbrush or sponge. Compress any seed cracks with a damp paintbrush (17). Smooth the surface inside and out using a moist sponge.

Finish and Glaze

Trim the saucers on the wheel, or smooth the bottoms with a rasp or sponge. Bisque fire the covers and saucers before glazing.

If you glaze the covers by dipping (18), note that they absorb water simultaneously from inside, outside, and along the edges of every cut. Allow the covers to dry for several hours or overnight after glazing. Clean any glaze off of areas that will contact the kiln shelf. Place the covers and saucers separately in the kiln and fire to temperature.

*Elizabeth Paley is a ceramic artist based in Durham, North Carolina. She teaches pottery classes at the community studio Claymakers (claymakers.org), was the founder and curator of The Potters' Penguin Project (facebook.com/potterspenguinproject), and is a collaborating artist with the math-art installation *Mathemalchemy* (mathemalchemy.org). To see more of her work, visit geekpots.com or Instagram [@geekpots](https://www.instagram.com/geekpots).*