

Ceramic Projects

Forming Techniques



Ceramic Arts Handbook Series



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The Pancaker

by Keith Phillips

Many years ago, shortly after our son was born, my mother-in-law was visiting and stayed with us through Christmas. My brother lived nearby at the time, and gave my mother-in-law a vintage pancaker from the 50's. You filled it with batter, held it over a hot skillet and depressed the plunger for a few seconds to open the plug at the bottom and let the batter flow into the skillet. The result: perfect pancakes with no mess. The pancaker she received came in the original 1950's box—everything about it was cool. I know I made pancakes every day during her visit.

A few years ago, I was pondering what handmade item I would give my brother for Christmas and decided on the perfect “re-gift”—I’d try to make my own pancaker out of clay. After a few attempts, I settled on the following design. As with any other work, I always like to make sure the design is flexible enough to make a variety of forms that will still fit the function.

My pancaker is basically a tall basket or bowl that has a pedestal



This 11½ inch high porcelain pancaker is basically a tall basket or bowl with a pedestal attached to the bottom to keep the stopper from touching the countertop. Beyond that basic requirement, the form is open for your creative touch.

attached to the bottom to keep the stopper from touching the counter. The plunger rod and nuts ideally should be made from stainless steel, however this is usually hard to come by, so a brass rod works just as well. The right-sized spring may also be hard to come by, but farm supply stores usually have a great selection. A spring from a retractable pen might work in a pinch. Finally, the #6–32 die probably has to be pur-

MATERIALS

- 3–4 pounds of clay
- 2 ft. of ⅛ in. brass or stainless steel rod
- 7/32 × 1 ¼ in. 020 compression spring
- 2 #6 – 32 hex nuts
- 2 #8 washers
- 5-minute epoxy
- #6 – 32 die (available at home centers)



1

Using 2½ to 3 lbs. of clay, throw the body of the pancaker, making it taper in slightly at the bottom.



2

Throw the pedestal separately as an open form, thrown upside down.



3

Throw a little knob off the hump so you can get under it and shape it.



4

Attach a small flattened coil to the inside bottom of the bowl as a second guide for the plunger rod.



5

Drill a hole in the second guide. Flip the pancaker over and re-insert the plug to make sure the holes line up.



6

Attach a handle then drill a hole through the center when leather-hard. Check that the holes line up.

chased as part of a tap and die set. This will be used to thread the rod once you have it measured and cut to size.

Throwing the Sections

Start by throwing a tall bowl with 2½–3 lbs. of clay. The shape or style is up to you (it doesn't have to be round!). Be sure the rim is a little thicker than normal. The weight of the basket-type handle can spread the bowl during firing, and a sturdy rim helps counter that.

Though the overall shape is up to you, the bottom of the pot should be about ¼–⅜ in. thick. The plug will be cut out of the bottom later and making it a little thicker makes this plug stronger. I usually taper the bottom of the form in slightly (figure 1), making a graceful transition to the pedestal foot that's attached later.

Next, throw the pedestal. This needs to be a bottomless form. It is thrown upside down, with the bottom tapered to match the diameter of the bottom of the bowl (figure 2).



7 Trim the bowl section then use a drill bit to create a hole in the exact center of the bottom of the bowl.



8 Using a needle tool held at an angle to create an inward taper, cut a 1 1/4 in. circle to make the plug.



9 Score the surfaces of the pedestal foot and the bowl, apply slip and join the two parts together.



10 Slide the other end of the rod into the bottom opening, through the bottom guide and into the handle.



11 Pull the rod up and check that the plug fits securely into the opening. Set the pancaker aside.



12 After inserting a scrap piece of rod and a spring into the knob, make a mark where the spring ends.

Finally, throw a little knob. I find it easier to throw small items off the hump, since the form I'm throwing is raised up on a mound of clay rather than close to the wheelhead, I can easily get to the underside and shape it (figure 3). When you're finished, just slice it off the mound using a wire tool.

Trim the bottom of the bowl. You don't need a proper foot since it will sit on the pedestal. Before taking it off the wheel, cut out the plug from the bottom. First take a 1/4 in. drill

bit and drill a hole in the exact middle of the bowl (figure 4). Then take your needle tool and cut a 1 1/4 inch diameter circle out of the bottom. This piece becomes the plug, so take care when cutting it out to keep it intact. Hold the needle tool at an angle and not straight up and down when making this cut. This creates an inward taper on the plug, so that it can easily be pushed open, but makes a seal when closed (figure 5).

It will be impossible to make the pancaker water tight, but batter



13

Drill a ½ in. deep hole in the knob using a ¼ in. drill bit.



14

After threading the die onto the rod, unscrew it carefully to reveal the threaded end.



15

Slide on the fired clay plug, a protective washer, and then thread on a nut to secure the plug.



16

Moving up from the handle, mark this measurement (minus ½ in.) onto the rod in the pancaker then cut to size.



17

Disassemble. Epoxy the rod into the knob, slide on a washer below the spring, and insert into the handle.



18

Slide the rod through the second guide, flip the pancaker over and reassemble the stopper mechanism.

is thicker and won't seep out. Just make sure the plug matches the hole as closely as possible.

Joining the Parts

Now score and slip the pedestal and the bottom of the bowl, then attach the two together (figure 6).

Roll out a small coil about an inch thick then gently flatten it so it gets a little wider, while keeping it about a half-inch thick. Form it into a bridge, then slip and attach it to the inside bottom of the bowl so that it spans

the hole. This is a second guide for the plunger rod, and will help make the stopper line up and the plunger operate smoothly (figure 7).

Drill a ¼ inch hole in the second guide, being sure to drill straight, lining it up with the hole in the plug. There is little play in between these two, so be sure this hole and the plug hole are exactly in the center of the bowl (figure 8).

Roll out another coil for the handle, then pull and taper both ends like a handle for a mug. Don't pull

too thin, you want it to hold its shape and not slump when fired. Make the mid-section near the top of the arch pretty thick as well, since you'll be drilling the guide hole for the rod through that section.

When the handle has stiffened enough to work with it, firmly attach it to the bowl. You want a strong attachment here as this is the area where cracks are most likely to form. If there's any place you develop cracks, it will probably be here. So dry slowly and be gentle.

When the handle has set, but before it's bone dry, drill your hole exactly in the center (figure 9). You can have more play here, and you might want to step up one size on your drill bit. You can always use a washer later if your hole is too big for your spring. Still, be very careful drilling the hole, be sure it lines up with the second guide hole in the strap of clay at the bottom. Also don't press too hard when drilling, you want the bit to "cut" the clay, not push through it.

The easiest hole to drill is in your knob. Don't go all the way through, you just need about half an inch for your rod to glue into (figure 10).

Slowly dry the pancaker and then bisque and glaze. When glazing, wax as you normally would. Fire the plug separate from the pancaker, as there's no way to secure it into the bottom. By firing it separately, you can also glaze the area that will eventually make contact with the bowl.

Creating the Mechanism

Use a die to thread the rod, so that a nut will gracefully screw on to it. Since you are using a $\frac{1}{8}$ -inch thick rod you will want to get a #6–32 die. This makes a thread for a fine-thread #6 machine nut.

Holding the rod with pliers, carefully start twisting the die onto the rod like you would if threading a nut, being sure to keep it straight. Once it is started, just keep rotating the die and it will carve the threads. You only need to thread about a $\frac{1}{4}$ - to $\frac{1}{2}$ -inch section of the rod. Unscrew the die and you should have a nice threaded end (figure 11).

Slide the stopper on with the bevel side up, then add a washer and nut (figure 12). Insert the rod into the bottom of the pancaker, through the bottom guide and finally into the hole in the handle (figure 13). Pull the rod all the way up (figure 14) to seat the plug then set the pancaker aside.

The next step involves measuring the rod to figure out the final length of your stopper mechanism. Push a spring and spare length of rod into the knob and make a mark on the rod where the end of the spring comes to when it's NOT under compression (figure 15). Measure that distance, and then subtract about half an inch. This will create enough tension to keep the plug seated securely so that it covers the opening. For example, my overall measurement came to $1\frac{3}{4}$ in., so my measurement for the next step was $1\frac{1}{4}$ in.

Pull the rod all the way up so the stopper seals the bowl. Now take the measurement from the previous step and add it to the rod. Start at the very top of the handle, measure up toward the end of the rod, and mark this point. This is where you want to cut the rod (figure 16). This should be a perfect length so the stopper is firmly under pressure, sealing the pancaker, but also leaving enough room so that the knob can be pressed down about a half inch, opening the stopper and releasing the batter. Disassemble everything and cut the rod with a hacksaw. Using the die, thread the end of the rod to make a nice “grip” for the glue.

Assembling the Pancaker

Take one end of the rod and slide the spring on, daub a fair amount of five-

minute epoxy onto the end and glue it into the knob. Make sure there is enough epoxy to hold everything in place when it sets. Also, make sure the rod is sticking straight out of the knob while the epoxy sets. Note: Even though it says five minutes, wait twenty before assembling your pancaker. Slide a washer against the spring and then insert the rod into the handle (figure 17).

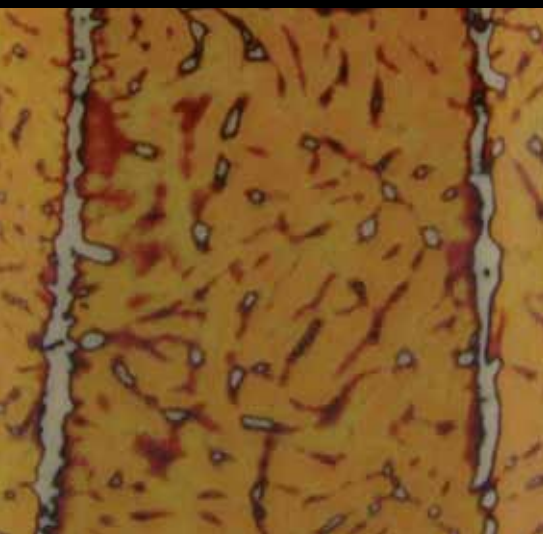
Slide the assembly down through the second guide and then flip the pancaker over (figure 18) and re-assemble the stopper. Slide the clay plug on, then slide a washer onto the rod so it rests against the clay plug and then thread on the nut against the washer. When the assembly is finished, just heat the skillet, fill your pancaker with batter and you’re ready to go.

Anderson Turner received a BFA in ceramic art from the University of Arizona and went on to earn an MFA from Kent State University (Ohio). A former assistant editor of *Ceramics Monthly* magazine, he has also edited numerous handbooks for The American Ceramic Society. He currently serves as the director of galleries for the Kent State University School of Art.

One of the most remarkable things about clay is that you can make most anything from it, and in *Ceramic Projects: Forming Techniques* dozens of clay artists prove this over and over. You'll discover some practical projects like Steve Davis-Rosenbaum's unique Chip and Dip server and Dannon Rhudy's Juicer to the more esoteric Pancaker of Keith Phillips and the exotic Condiment Server from Gwendolyn Yoppolo.

Beyond simple cylinder and slab construction, these projects get into combinations of techniques—adding textures, cutting darts, extruding forms, faceting, assembling multiple parts, and more. Techniques that will make your work stand out. For the intermediate potter looking for the next challenge and the advanced clay artist seeking inspiration, these projects run the gamut of possibilities.

The potters and ceramic artists presenting the projects here are experts in the field—many with decades of experience. These artists also spend time giving workshops or teach courses so their information is thorough and amply documented. And you'll delight in the stories and the thoughts they have about the projects they demonstrate. With so many projects and scores of variations, you'll find more than enough ideas to last a lifetime.



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