

MOLD MAKING INSTRUCTIONS

- **FLAT & DOMED BATS** with the **QUICK RELEASE** option

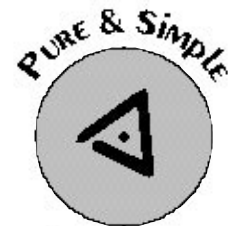
- **THE SlumpHUMP MOLDS**

Making a mold is easy. All you need are a few tools, time to organize your materials, and a good working space.

If you haven't poured plaster before, be sure to follow the instructions provided before starting. Plaster is an unforgiving taskmaster.

In general, the instructions will cover three areas:

- **Mold Making**
- **Alterations**
- **Form Development**
- **Depth Diminishing**



**POTTERY
PRODUCTS**

www.pspottery.com

POINTS TO REMEMBER

There are 15 simple steps to making a mold. Follow them carefully and you won't have any problems.



The QUICK-RELEASE

- **Larger half is used for casting.**
- **Smaller half goes on the wheel-head, attached with your wheel-head bolts. They are pre-drilled 9" and 10" on center.**

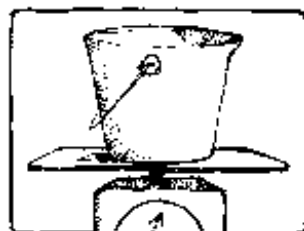


- 1** **SPRAY** or brush on a mold release to both the Quick-Release and your mold. Add extra coats for the bowl molds.

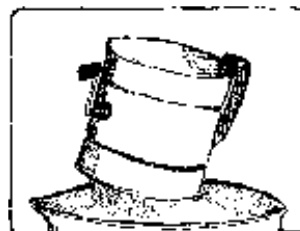
Materials*

Mold release
Bucket
Scale
Mechanical mixer
Scrim cloth, optional
Pottery Plaster #1

*See page 2 for recommended vendors.



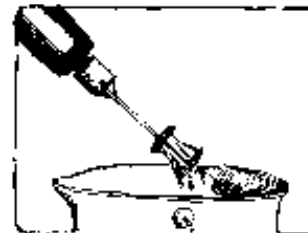
- 2** **WEIGH** an empty bucket, then add the water given in the formula (factoring in weight of bucket).



- 3** **SIFT** or strew the plaster into the water until you have the correct weight of plaster.



- 4** **WAIT** a few minutes to allow particles to be wetted.

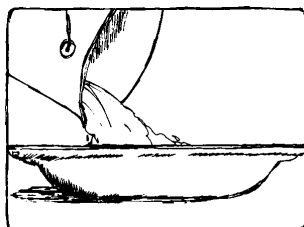


- 5** **MIX** for two minutes; use a mechanical mixer for stronger bats.

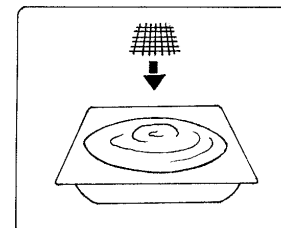
Tips

Store your Pottery Plaster #1 in an airtight container. Check the bag's date before you buy.

Suspend and support the smaller molds in a bucket when pouring. Use a barrel for the larger molds. Then test for level.

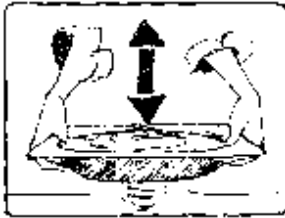


- 6** **POUR** plaster into the mold *just shy of the top. Don't under-fill or the Quick-Release won't work.*

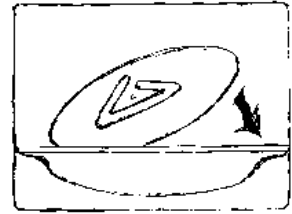


- 7** **USE** Scrim Cloth or Hardware Cloth with the 13" flat mold ONLY (unless you wish to add additional strength to others).

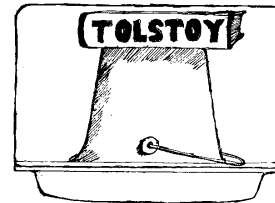
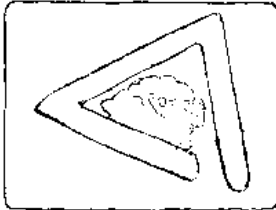
8
TAP mold firmly to force out any air bubbles.



9
SEAT the QUICK-RELEASE into the mold.



10
FORCE OUT any excess plaster through the overflow holes in the QUICK-RELEASE. Press the outside edge of the QUICK-RELEASE down to firmly seat it.



11
WEIGHT to assure a level cast.

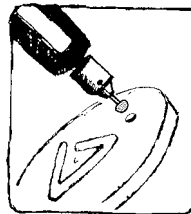
12
SET UP 30 minutes to an hour, depending on the size of the bat.



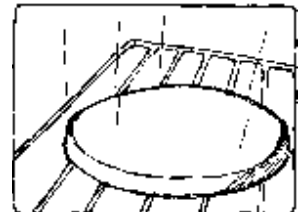
13
REMOVE bat by pressing around outer perimeter of the mold while turning.



14
CARVE out a cave in the back of the bat using a dome-shaped grinder bit to provide clearance for the wheelhead bolts.

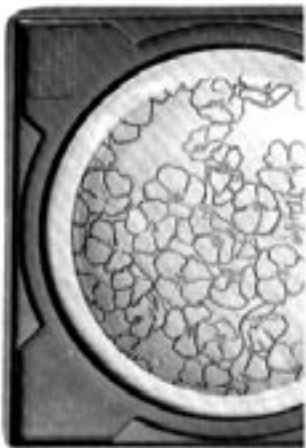


15
DRY bats thoroughly to drive off most of the free water. A pilot light works well, or the sun on asphalt driveway or corrugated metal, etc. Don't exceed 120°.



The Gallery

A dry bat is important!



Curved



Stamped



Slip Trailed



Combed

ADDITIONAL INFORMATION ON VENDORS

Mold Releases:

Your local Ceramic supply house usually carries a spray mold release and a mold soap. They both work well. Here are some other options:

- Aarmorall, a leather protectant
- Murphy's Oil Soap
- Kiwi Saddle Soap

Johnson's Liquid Wax Plaster:

Use Pottery Plaster No. 1 For additional information about Plaster, contact United States Gypsum Corp. 1-800-621-9622.

Mesh

To strengthen your molds you can use a variety of

materials. I have tried Hardware Cloth, which is readily available at hardware stores, but I prefer a fiberglass mesh called Scrim fabric. It's about \$1.40 a yard from this company:

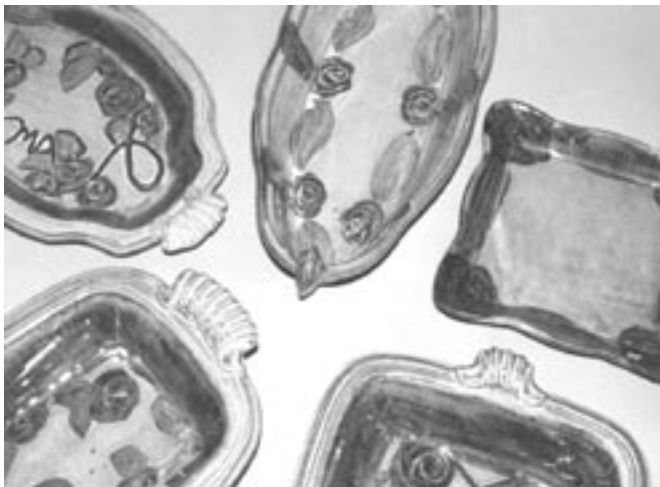
Douglas & Sturgess, 730 Bryant Street San Francisco, CA 94107 (415) 421-4456 1-888-278-7883 They have a great catalog, too, which features everything for the mold maker.

The SlumpHUMP FORM DEVELOPMENT

Here are a few techniques that I have found useful in forming my own pieces. After a while, I'm sure you'll discover many other ways of using the

Materials

- Fettling knife
- Squeegee
- Template material (poster board works well)
- Dulled pin tool
- Sponge
- Rubber rib



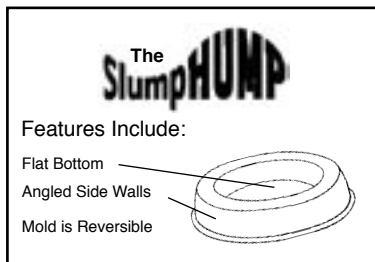
Tips:

Soften the edges of your bat with a fettling knife to keep edges from chipping.

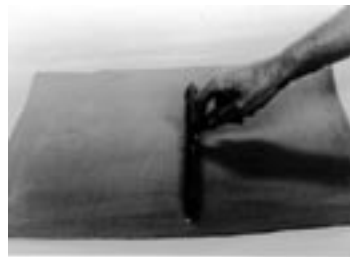
As a general rule, increase the thickness of your slabs as the mold size increases.

Bevel tool: a piece of Formica notched with a rattail file is a good tool to finish the rim.

A textured slab can add interest to your finished piece. Experiment with such things as heavily embossed wallpaper, lace, rubber mats, or gunny-sack, etc.

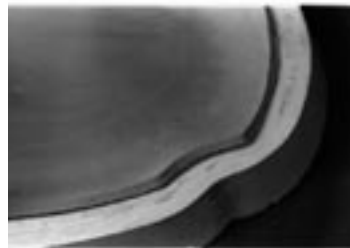


Medium Deco by Melinda Kipp, Sacramento, CA



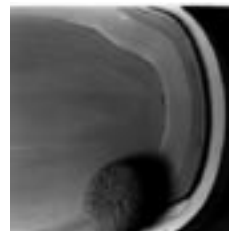
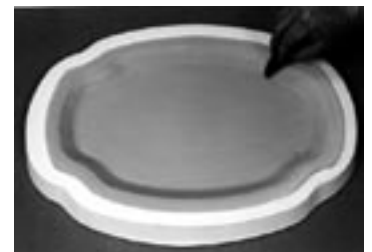
1 **SMOOTH** the slab on both sides using a squeegee.

2 **CUT** the slab to the right size and shape. (I use a template that gives me an exact fit or I use a flat wooden stick as a guide.



3 **POSITION** the slab over or in the mold.

4 **DEFINE** the angles, sides, and rim with a rubber rib and sponge, while turning mold on banding wheel.



5 **FINISH** the rim with a bevel tool, or as you wish.

6 **ADD** handles if desired. Rondelle used to texture rim.



PLASTER FORMULAS

MOLDS	LBS. OF PLASTER <i>lbs - oz</i>	LBS. OF WATER <i>lbs - oz</i>
#1 Dinner Plate	7 - 3	5
#1 Salad Plate	5	3
#2 Lid & Bowl	11 - 10	8 - 3
#3 Dinner Plate	7 - 3	5
#3 Salad Plate	5	3
10" Flat	5	3
13" Flat	6	4
15" Flat	9 - 5	6 - 8
18" Flat	15 - 10	10 - 14
18" Platter	13	9 - 2

Note 1: Don't forget to factor in the weight of the bucket that you are using.

Note 2: A reinforcing mesh is recommended for the 13" Flat and any mold poured to a thin depth. This will greatly increase the durability of the bat. See page 2 under Mesh for details.

Note 3: The #2 mold and the 18" bowl need two coats of a mold release.

Note 4: Some smaller molds require more plaster than larger molds, because they are deeper.

Drying Tips

Plates

As soon as form will release- dry rim down.

SlumpHumps

If form pulls up in center-slow down the drying by covering with plastic.

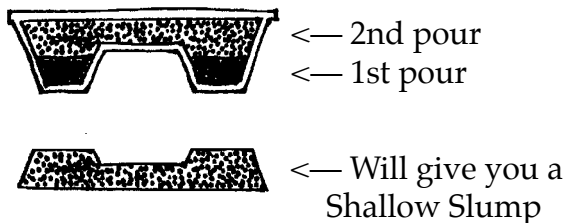
SlumpHump Molds	LBS. OF PLASTER <i>lbs - oz</i>	LBS. OF WATER <i>lbs - oz</i>
Large Deco		
<i>slump</i>	9 - 5	6 - 8
<i>hump</i>	5 - 4	3 - 10
Medium Deco		
<i>slump</i>	6 - 8	4 - 8
<i>hump</i>	2 - 10	1 - 13
Large Oval		
<i>slump</i>	11 - 3	7 - 13
<i>hump</i>	5 - 14	4 - 2
Medium Oval		
<i>slump</i>	11 - 10	8 - 3
<i>hump</i>	6 - 8	4 - 8
Large Ellipse		
<i>slump</i>	11 - 10	8 - 3
<i>hump</i>	6 - 8	4 - 8
Medium Ellipse		
<i>slump</i>	8 - 6	5 - 14
<i>hump</i>	3 - 14	2 - 8
Large Oblong		
<i>slump</i>	11 - 10	8 - 3
<i>hump</i>	7 - 13	5 - 8
Large Rectangle		
<i>slump</i>	11 - 3	7 - 13
<i>hump</i>	5 - 14	4 - 2
Medium Rectangle		
<i>slump</i>	12	9
<i>hump</i>	9 - 13	6 - 14
Small Rectangle		
<i>slump</i>	10 - 8	7 - 6
<i>hump</i>	5 - 3	3 - 10
Large Square		
<i>slump</i>	15 - 6	10 - 6
<i>hump</i>	9 - 5	6 - 8
Medium Square		
<i>slump</i>	14 - 5	10
<i>hump</i>	9 - 13	6 - 14
Small Square		
<i>slump</i>	9 - 13	6 - 14
<i>hump</i>	5 - 3	3 - 10
18" Bowl		
<i>slump</i>	28 - 10	20
<i>hump</i>	22 - 2	15 - 8
Fish Platter		
<i>slump</i>	15	11
<i>hump</i>	13	9

DIMINISHING THE DEPTH OF YOUR SLUMP MOLD

At times you might want to make a mold that's a bit more shallow. You can turn the deeper (2 1/4") molds, suitable for baking dishes into shallow molds suitable for platters or trays by following this sequence.

HERE'S ONE WAY:

1. **COAT** the mold with mold soap.
2. **POUR** plaster into the mold to the level you desire. Shake mold to level plaster. Let set up.
3. **COAT** the plaster three times with mold soap. Let dry between coats.
4. **FILL** mold to the top with plaster.
5. **SEPARATE** the two plaster forms.



HERE'S ANOTHER WAY:

1. **COAT** the mold with mold soap.
2. **POUR** plaster into the mold to the level you desire. Add reinforcing Scrim cloth. Shake mold to level plaster. Let set up. This gives you a "donut" that will need a masonite or plastic bat to form the floor. This donut can be hung from a hook on the wall to conserve



CHANGING THE CONTOUR OF YOUR SLUMP MOLD

The medium oval mold, for example, makes a fine baker without adjustments but for a platter I like to reduce the depth of the wall and change it's contour. I want the inside wall to have a greater steepness to it.

The following is a step-by-step guide to modifying the Oval SlumpHump or a different mold of your choice.

1. EXTRUDE A COIL

You can make do with a round coil flattened while turning on a banding wheel but ideally you will want to extrude a triangle shaped coil.

2. INSERT THE COIL INTO THE MOLD

Place the coil where the wall joins the floor and smooth it into place with a rubber rib while turning on a banding wheel.



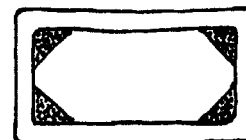
Shows triangular shaped coil in bottom of mold

3. POUR IN THE PLASTER

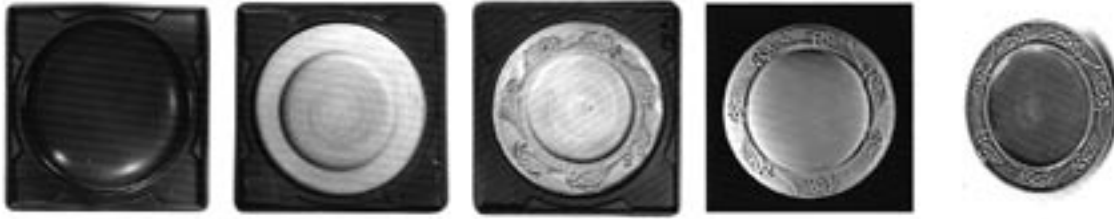
Spray or brush on a mold release and then add some scrim cloth which will strengthen the mold. Make sure the mold is on a level surface and then pour in the plaster to the desired depth. This will give you a donut shaped mold with a greater draft angle to the inside wall. You will need to place the donut on a masonite or plastic bat to support the floor of your piece.



Shows donut mold with increased draft angle to inside wall.



You can also add clay in the corners to modify the shape, and then pour. A modification to the Large Rectangle is shown to the left.



Mold

Clay Slab Inserted

Stamped

Plaster Bat

Plate

ALTERING THE QUICK-RELEASE MOLDS

We suggest you use our molds as a foundation for creating your own personal shapes and patterns. I usually use a combination of the two methods described below:

The Sponging Method —

This is the METHOD OF CHOICE if you want to alter the shape a lot, or if you wish to stamp, carve, comb or slip trail.

1. Lay a clay slab cut to size in the bottom of the mold.
 2. Attached the mold to the wheelhead; a Giffin Grip works well, or a thrown ring or clay coil.
 3. While the wheel is turning, sponge and rib the slab into the desired contour.
 4. You can now add a pattern in the slab if you wish.
 5. Use a good mold soap and pour the plaster as described above.
 6. You may wish to pour several bats from a favorable slab; just pour it when the clay is nearly leather hard.
- See photo sequence above.

The Carving Method —

1. Carve the bat while the bat is turning at high speed.
2. Major carving is best done when the bat is still somewhat soft.
3. There are various plaster carving tools, metal ribs and dental tools you may wish to utilize.

Some Favorite Alterations are —

- To get a nicely rounded lip on your plate, it helps to carve a groove in the bat where you want the lip to be. Matched with a thickening on the back of the plate, a nicely rounded lip is achieved. A little scraping or sponging of the seam should be all that is necessary. For example, with the #3 Plate I add a groove in plaster, then I feather back to blend. See Fig. 1 below.
- Add a raised and/or recessed channel to the rim of the plaster plate to add distinction.
- Carve a groove in the lid bat to create a flange for a “flange lid.”



Fig. 1 - Favorite alteration for #3 plate

Throwing Tips —

1. Start with a predetermined amount of clay for consistency, or cut a slab to size.
2. Using a clay patty about the size of the bat will help eliminate facial creasing.
3. Use clay as soft as is workable.
4. Press the clay firmly down and avoid moving it back and forth which may cause facial creasing.
5. Care should be taken with the lip of the form so that only a little sponging will be necessary.

MOUNTING THE QUICK-RELEASE WHEELHEAD ATTACHMENT TO YOUR WHEELHEAD

1. Place the smaller (12") QUICK-RELEASE piece on the wheelhead.
2. Put your wheelhead bolts through the holes in the QUICK-RELEASE.
3. Place a plaster bat on it and center it.
4. When the bat is on dead center remove it and tighten down the wheelhead bolts.
 - If you have wheelhead bolt spacing other than 9" or 10" on center, then you will need to re-drill the holes to fit. Do the following:
 - You can use a pre-drilled bat as a template for the hole placement or you can center the 12" QUICK-RELEASE piece and mark where the holes need to be.
 - Drill holes slightly oversize to allow for final adjustment to bring the bat on dead center.
5. The plaster bat needs to sit flush against the QUICK-RELEASE, so you will need to make concave areas where your bat meets the bolt heads, otherwise your bat will not sit flat.

CASTING WITH THE 18" MOLDS

The Adaptor is used only with the 18" molds to extend the width of the Quick-Release.

- Putting the QUICK-RELEASE and the adaptor together for casting.



1. Use four nuts and bolts to

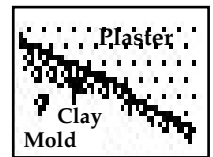
hold the two pieces together. Note that the head of the bolt should rest on the raised triangle side.

The bolthead will then be used to create a hollow impression in the back of the bat when casting. This will allow for clearance of your wheelhead bolts. Your bats should then rest flat on the wheelhead.

- If you have a wheelhead bolt spacing other than 9" or 10" on center you will need to drill the QUICK-RELEASE and Adaptor to fit: Nest the smaller QUICK-RELEASE piece which has been drilled in the larger piece. Fit the two together into the adaptor. Drill the holes through. Also, check to make sure the overflow holes, the three (3) holes in the triangle of the 14" QUICK-RELEASE align with those of the Adaptor. If they don't simply re-drill them.

TROUBLESHOOTING

- Warping a problem? The placement of the foot to support the outer edge is important. If that doesn't do it then increase the draft angle with the sponging method, i.e., increase angle here. **Also, as soon as your forms release from the mold, dry them rim down.**
- Forms not releasing? If your forms take longer than a day to release, or crack before releasing then there is probably too much moisture still in the bat. Give thorough drying as in #13 above.
- If your forms dry too fast, slow down the absorption rate by plunging bat in water before throwing.
- If you get creases on the face of your plate, try spraying it with a mold release before throwing. Also, use a paddy or slab the same size as the bat and press the clay firmly down. Avoid moving the clay back and forth when throwing.
- Should you leave the bat in the mold too long and have difficulty removing it, you can hold the mold in a tub of hot water, then remove as in #12 above.
- Bat wobble? Your bat doesn't sit flat. Check for wheelhead bolt clearance. Carve out the plaster that is preventing it from sit-

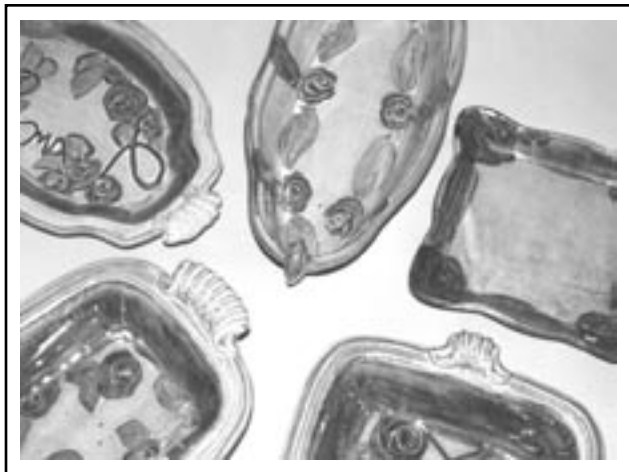




John Dodero of Jacksonville, OR uses our platter mold to create multiple replicas of high-relief designs.

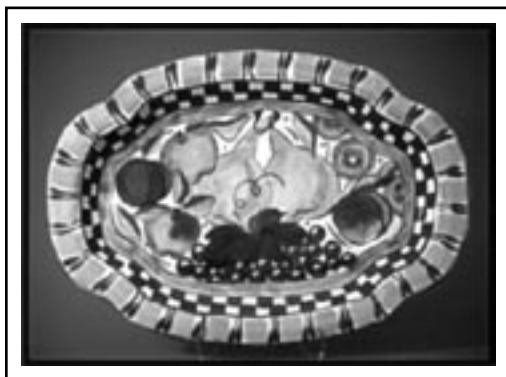
We are always looking for artist using our molds in interesting ways. Submit your photo and if used we will give you a free mold of your choice.

Mark Williams of South Haven, Michigan, decorates his bowls before he throws them. Shown here is his 11 inch bowl. Mark decorates a slab using stamps, inlaid slip, stencils, and slip trailing. After decorating he drapes the slab over our #2 bat mold or the 18" bowl. With the Quick-Release option, Mark can easily attach the bat to the wheel-head and throw the foot.



Sheila Jenkins of Ukiah, CA slump molded pieces. Shown here clockwise from the top left are the Medium Deco, the Large Ellipse, the Small Square Plate, the Small Square Baker, and the Oblong Baker

Large Deco platter by Melinda Kipp of Sacramento, CA. "There are easy to use and produce consistent, professional results."



Michael Kifer of Richland, MI uses our #2 mold to create this teapot as well as other forms