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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**

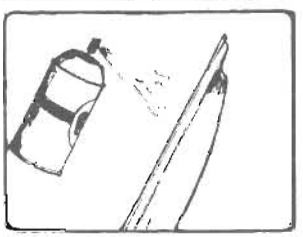
Pure & Simple
Pottery Products

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 wheelhead, attached with your wheelhead bolts. They are pre-drilled 9" and 10" on center.**

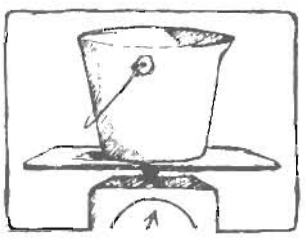


1
SPRAY or brush on a mold release to both the Quick-Release and your mold. Add extra coats for the bowl molds.

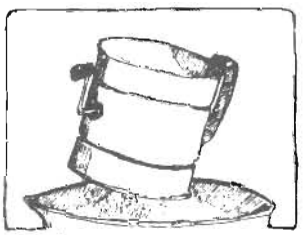
Materials* to assemble

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).



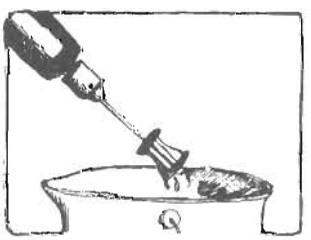
3
SIFT or strew the plaster into the water until you have the correct weight of plaster.

Tips

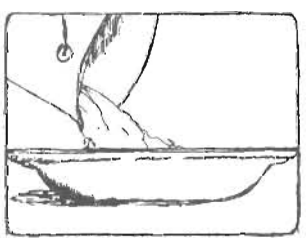
Store your Pottery Plaster #1 in an airtight container. Check the bag's date before you buy.

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

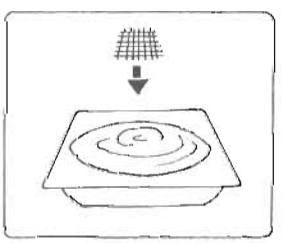
4
WAIT a few minutes to allow particles to be wetted.



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

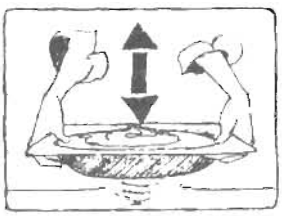


6
POUR plaster into the mold *just shy of the top. Don't under-fill or the Quick-Release won't work.*

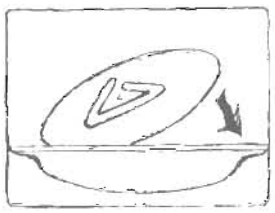


7
USE Scrim Cloth or Hardware Cloth with the 13" flat mold ONLY (unless you wish to add additional strength to others).

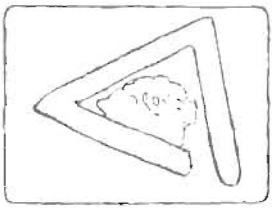
8
TAP mold firmly to force out any air bubbles.

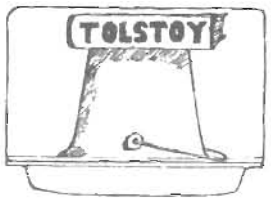


9
SEAT the QUICK-RELEASE into the mold.



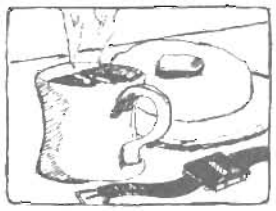
10
FORCE OUT any excess plaster through the overflow holes in the QUICK-RELEASE . Press the outside edge of the QUICK-RELEASE down to firmly seat it.





11
WEIGHT to assure a level cast.

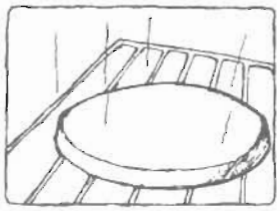
12
SET UP 30 minutes to an hour, depending on the size of the bat.



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

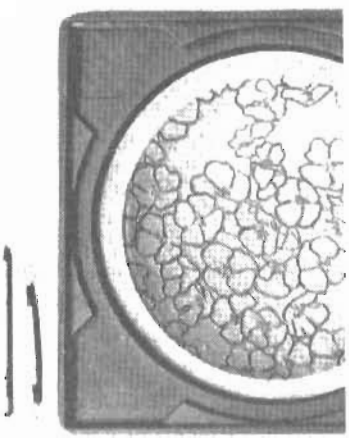
14
CARVE out a cave in the back of the bat using a dome-shaped grinder bit to provide clearance for the wheelhead bolts.

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°.



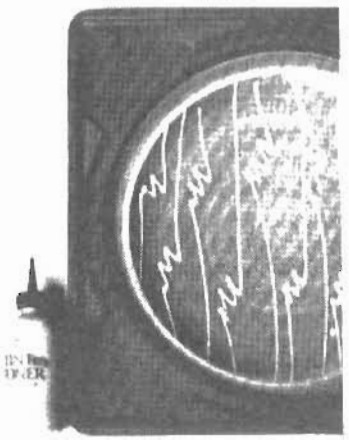
A dry bat is important!

The Gallery



Curved

Stamped



Slip Trailed

Combed

ADDITIONAL INFORMATION ON VENDORS

Mold Releases:
Your local Ceramic supply house usually carries a spray mold release or a mold soap. Here are some other options:

Pure Lube

Armorall
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 St.
SF, CA 94107
(415) 421-4456
1-888-2787883

They have a great catalog, too, which features everything for the mold maker.
www.artstuff.com

PLASTER FORMULAS

MOLDS	LBS. OF PLASTER *lbs - oz*	LBS. OF WATER *lbs - oz*
#1 Dinner Plate	7 - 3	5
#1 Salad Plate	5	3
#2 Lid & Bowl	11	8
#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
18 Bowl		
slump	29	20
hump	22	16

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 to increase the durability. See page 2, under mesh, for details.

Note 3: The #2 mold, 18 Bowl and Salad Plates need 3 coats of a good mold release

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 *lbs - oz*	LBS. OF WATER *lbs - oz*
Large Deco		
slump	9 - 5	6 - 8
hump	5 - 4	3 - 10
Medium Deco		
slump	6 - 8	4 - 8
hump	2 - 10	1 - 13
Large Oval		
slump	11 -3	7 - 13
hump	5 - 14	4 - 2
Medium Oval		
slump	11 - 10	8 - 3
hump	6 - 8	4 - 8
Curved Oval		
slump	17	12
hump	11	8
Large Ellipse		
slump	11 - 10	8 - 3
hump	6 - 8	4 - 8
Medium Ellipse		
slump	8 - 6	5 - 14
hump	3 - 14	2 - 8
Curved Ellipse		
slump	15	10
hump	8	6
Large Oblong		
slump	11 - 10	8 - 3
hump	7 - 13	5 - 8
Large Rectangle		
slump	11 - 3	7 - 13
hump	5 - 14	4 - 2
Medium Rectangle		
slump	12	9
hump	9 - 13	6 - 14
Small Rectangle		
slump	10 - 8	7 - 6
hump	5 - 3	3 - 10
Large Square		
slump	15 - 6	10 - 6
hump	9 - 5	6 - 8
Medium Square		
slump	14 - 5	10
hump	9 - 13	6 - 14
Small Square		
slump	9 - 13	6 - 14
hump	5 - 3	3 - 10
Fish Platter		
slump	*15*	*11*
hump	*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 ¼") 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.

<— 2nd pour
<— 1st pour

<— Will give you a Shallow Slump mold

Here's the Simplest 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 space.

CHANGING THE CONTOUR OF YOUR SLUMP MOLD

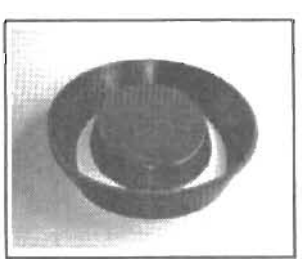
The medium oval mold, for example, makes a fine baker without adjustments but for a platter I like to reduce the depth of the wall and change it's contour. I want the inside wall to have a greater steepness to it.
The following is a step-by-step guide to modifying the Oval SlumpHump or a different mold 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

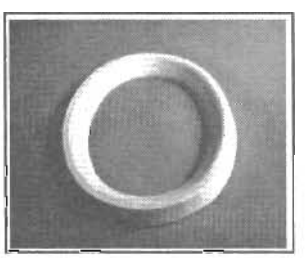
Place the coil where the wall joins the floor and smooth it into place with a rubber rib while turning on a banding wheel.



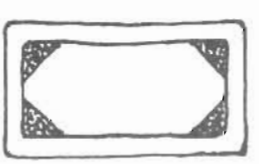
Shows triangular shaped coil in bottom of mold

3. POUR IN THE PLASTER

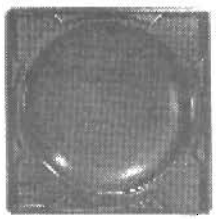
Spray or brush on a mold release and then add some scrim cloth which will strengthen the mold. Make sure the mold is on a level surface and then pour in the plaster to the desired depth.
This will give you a donut shaped mold with a greater draft angle to the inside wall. You will need to place the donut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

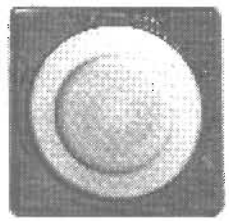


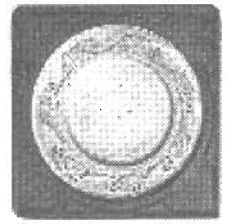
Shows donut mold with increased draft angle to inside wall.

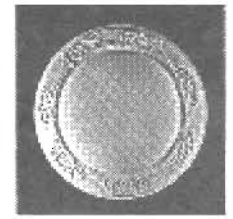


You can also add clay in the corners to modify the shape, and then pour. A modification to the Large Rectangle is shown to the left.


Mold


Clay Slab Inserted


Stamped


Plaster Bat


Plate

ALTERING YOUR 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 fit in the bottom of the mold.
2. Attach 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. To pour several bats from a favorable slab; pour it when the clay is nearly leather hard and use several coats of mold soap. (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.

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 smoothing and sponging of the seam should be all that is necessary. For example, with the #3 Plate, I add a groove in the plaster andthen I feather back to blend. This gives the plate more character and reduces warpage.
- 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

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. Using flat washers, 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 with the nuts provided.

- If you have wheelhead bolt spacing other than 9" or 10" on center, then you will need to redrill the holes to fit. To do this 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 in the plaster where your bat meets the bolt heads. Otherwise your bat may rock.

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. To hold the two pieces together, push two bolts through the two pieces and tighten down with nuts. For added support, you may wish to add two additional bolts.

Note that the head of the bolt should rest on the raised triangle side (see photo).

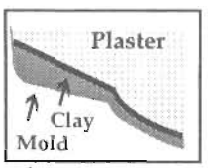
2. The bolthead will then be used to create a hollow impression in the back of the bat when casting. This will allow for clearance of your wheelhead bolts. Your bats should then rest flat on the wheelhead.

- 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 holes in the center of the triangle) of the 14" QUICK-RELEASE align with those of the adaptor. If they don't then re-drill them.

TROUBLESHOOTING

- Warping a problem? **As soon as your forms release from the mold, dry them rim down.** The placement of the foot to support the rim is important. If that doesn't do it then increase the draft angle of the rim with the sponging method.



- 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 (See#14 on page two).
- Forms drying too fast? Slow down the absorption rate by plunging bat in water before throwing.
- Creases on the face of your plate? Use a patty or slab the same size as the bat and press the clay firmly down. Avoid moving the clay back and forth when throwing.
- Bats not releasing? You can hold the mold in a tub of hot water to soften the plastic, then remove as in #12 above.
- Bats wobbling? Your bat doesn't sit flat. Check for wheelhead bolt clearance. Carve out the plaster that is preventing it from sitting flat.
  Another possibility could be that you've under-filled the mold so the Quick-Release won't work properly.