

Part 1 of 2



Finished head in the round

Life Casting a Head in the Round

By David E. Parvin, A.L.I.

To call oneself a competent life caster one should be able to cast a complete head all the way around or in the round. There are two different reasons for doing this, one is a tool for the special effects industry and the other is a portrait. For special effects what is needed is an exact three-dimensional model of someone's head to build a prosthesis that can be fitted to transform an actor into a Klingon, vampire, etc. For a portrait, what is needed is an exact three-dimensional model of someone's head as a traditional, free standing bust. For special effects, any hair is superfluous and a scull cap simplifies the molding of the head. For a portrait, any hair is essential for a recognizable likeness. What I am going to describe here and in next month's article is how to cast a portrait head using alginate for the mold and Forton MG to make a cold cast bronze bust. I will also explain how the special effects process differs and offer some other material options.

Those readers familiar with my past articles in Sculpture Journal may remember that I try to be sensitive to Oregon tree huggers who are adamant that this magazine's size be kept to a minimum so that the least number of baby trees have to be clubbed to death each month for their pulp and who have bumper stickers like, More Trees, Less People: and Spotted Owls Need Loving Too. While I am aware that my position may anger the timber industry where jobs and survival depend upon the

destruction of our forests and whose stickers say, Kill a Tree, Feed a Child and Spotted Owl, The Other White Meat, I have decided to side with the conservationist and make every effort to reduce redundancy. Since some of the materials and methods used in this article have been thoroughly covered in previous articles, I will describe the quick version and refer the reader to past articles for a more complete explanation.

Also, if I may be so shameless, through explanations with visuals are presented in my video, "Casting the Female Torso" which is available from me, ArtMolds, the Complete Sculpture, Sculpture House, or Ball Consulting, all of which advertise in this magazine.

Prior to doing a life casting, I always try to meet with the subject and find out what he or she wants and to explain the process. Sometimes the client comes up with a twist anywhere from interesting to impossible. But often he or she just leaves it up to me. For this article, I wanted a representative casting that included as far down as the shoulders. As it turned out, the subject, MacKenzie, had hair that came down well below the shoulders; hair that would have to end abruptly or somehow be included in the composition. After some discussion, we decided to cast the full length of the hair, even though it would extend below where the rest of the casting ended. (See photograph # 1)

On the day of the casting, I had MacKenzie put on a paper hospital gown to keep her modestly covered and protect her clothes while my two assistants and I prepared her hair. I always have an assistant for two reasons. Firstly, it's really a necessity for all but the simplest life casting. Secondly, if I am doing something that involves touching a female, I always have another female present. While this last reason isn't as important, as when casting a face or head as it would be for a body, it is just professional ethics. This particular day I had two helpers, Kelly and Kelsey, the latter of which hadn't seen this process and wanted to learn it.

The first step was to protect the hair. Up to about 15 years ago, most life casters, including myself, avoided hair as much as possible and what couldn't be avoided was covered with petroleum jelly or Crisco. The problem was that the poor castee had a real tough time getting the PJ or C washed out. The hair stylist mother, of a little girl whose face I was casting, suggested that I try a standard old hair conditioner called "Cholesterol." To my amazement it not only worked, but it worked very well. Not being one to jealously guard a discovery, I have shared this with the world and am happy to say that it has since become a standard technique for life casters. Another choice now is a product called MoldEZ from ArtMolds.

In photograph #2 Kelly and Kelsey are preparing the hair. The technique is

simple. The idea isn't just to cover the hair, but to work the conditioner thoroughly into the hair right down to the scalp as if one were trying to do the most complete conditioning possible. With someone whose hair is as thick, beautiful, and long as MacKenzie's, this step should take at least twenty minutes and use up to two pounds of conditioner. Once applied, the hair can be shaped into the style desired (photograph #3). Then leaving it alone for about 15 minutes will allow the hair to stiffen up slightly so that the styling can be tweaked and a little more texture worked in. During the 15 minutes, I make sure that everything needed is ready:

- ✓ A small amount of petroleum jelly.
- ✓ A spray bottle of Algislo. (See How To Extend the Setting Time of Alginate and Testing a New Product, SJ, May 2003.)
- ✓ An electric drill with a paint or Jiffy Mixer
- ✓ A scale.
- ✓ Latex gloves in the right sizes.
- ✓ A few pop sickle or giant craft sticks.

For the first coat of alginate, a one gallon bucket with 4 pounds of water at about 80 degrees F (27 degrees C.) and 20 ounces of alginate in another container. My alginate of choice is FiberGel EFX by ArtMolds, which has a 5 minute setting time at 80 degrees. (See FiberGel EF/X Fame or Shame, SJ, May 2003).

- ✓ For the second coat of alginate, 2 pounds of water and 10 ounces of alginate. As I will explain below, this water may be warmer up to about 105 degrees F. (41 degrees C.).
- ✓ At least 10 pounds (4540 grams) of a fast setting plaster, preferably Impression Dental Plaster from U. S. Gypsum, and some cheese cloth cut into the following lengths: five about 6 inches (13 cm.) long, twelve about 12 inches (30 cm.) long, and one about a yard (92 cm.) long.
- ✓ One can substitute plaster bandages but I feel that they are very much inferior to plaster and cheese cloth. (See An Alternative to Plaster Bandages for Life Casting, July 2003, SJ,
- ✓ Another bucket to mix the plaster.
- ✓ About a 4" x 4" (10 x 10 cm.) square cut from a roll of medical cotton. This may be purchased from any one of the advertisers mentioned earlier. The rolls you can buy from the local drug store will work but are much more expensive.
- ✓ A couple of inexpensive natural bristle chip brushes 2 or 3 inches wide.

After the final adjustment to the hair and positioning the head, apply a little petroleum jelly to the eyelashes and eyebrows. Some alginates set up so firmly that they can adhere to the lashes and brow hairs well enough to pull some out when removed. FiberGel is soft enough that it isn't a problem. However, the PJ not only is a little insurance but will also help define the eyebrows in the final casting.

Now we are ready to begin the life casting. Some sort of a timer that can be easily seen is very helpful; I use a darkroom timer, which I set for thirty minutes. The 20 ounces of alginate can be dumped all at once into the water and mixed. It should take no more than 60 seconds to get a lump free, smooth consistency. The number one mistake in using alginate is to have it too runny. It should be thick enough that it will stay in place about 1/4 inch (.4 cm.) thick. (See Casting Perfect Ears, May 2004 for more tips on mixing and applying alginate). After mixing, you should have about 4 minutes to cover the head front and back and as far down the shoulders as desired. Be very careful, of course, to keep the nostrils clear; using the craft sticks as necessary.

Just as the alginate starts to set up, mist the entire surface with Algislo which will keep the surface of the front half soft enough that cotton can be pressed into it and cause a second layer of alginate to bond to the back half. If you are a little slow and the alginate sets up, the Algislo will still soften the alginates' surface sufficiently. Take the 4 X 4 inch cotton pad mentioned

above and pull it apart into two pads half as thick. Press the inside sides of the pads against the front of the alginate and pull them away leaving some of the cotton sticking to the alginate. Repeat until the front half is covered with cotton. (Photograph #5)

Building the supporting or mother mold for the front half is next. Pour about two pounds of water into a bucket and add enough fast setting plaster so that the wet solution is about the consistency of cream. Equal parts plaster and water by weight, rather than the normal ratio of 100 parts plaster to 70 parts water, will give you the right consistency. With one of the cheap paint brushes, paint the entire front half where the cotton has been added. Be sure to soak the cotton thoroughly. Starting at the top and the outside edge of the cotton, I have our assistant place one of the 12 inch strips of cheese cloth over the alginate. Paint plaster over the cheesecloth soaking it through. (Photograph #6) Repeat until the front half has been covered with two layers of cheesecloth and plaster. By this time the remaining plaster in the bucket will be thickening. Take the 3 foot long piece of cheese cloth and soak it in the plaster then twist it until it is like a plaster soaked rope. Place this rope on top of one of the shoulders at the back edge of the plaster, up the neck, across the head at the ears, and down on top of the other shoulder making a ridge that divides the front and back halves as shown in photograph #7.



My two able assistants preparing MacKenzie's hair



MacKenzie ready for the alginate



The head and shoulders have been covered with FiberGel and Kelsey is spraying on Algislo over the entire surface.



Using the yard long strip of cheese cloth to build a ridge from one shoulder across the top of the head over the ears and down the other shoulder



Kelly and Kelsey are pressing cotton into alginate on MacKenzie's front only

The next step is to thicken the back half by adding another layer of alginate. I generally use warmer water for this layer to reduce the setting time. Just before mixing, make sure that the first coat of alginate still feels slippery from the Algislo, if not, mist the surface again. Make sure that the second layer covers the back edge of the plaster ridge. This will allow the back mother mold to be built right up to the ridge without bonding the front and back together. This back mother mold is built exactly like the front except that no cotton was pressed into the alginate here and the mother mold and the alginate are not stuck together.

Wait until the plaster feels warm before removing the back mother mold. By just prying gently at the edges, it should come off easily and cleanly as in photograph #9. To remove the rest of the mold, start by cutting a slit up the center of the back with a DULL cutting instrument. A pallet knife works very well, it is sharp enough to cut the alginate but will not cut the subject. (Photograph #10) The alginate should be at least a half inch thick. If you are using FiberGel, you will not be able to cut through the fibers which will simply be pulled free and present no problem. Try to cut some zig zag registration marks in the outer half of the alginate but make the cut as straight as possible on the inside where the alginate touches the skin or hair. This will help align the mold and reduce the seam.



Building the mother mold on the front with Impression Dental Plaster and Cheese cloth



Applying Plaster and cheese cloth to the back of the mold



Removing the back half of the mother mold

The rest of the mold should come off easily. Have the subject frown and smile to break any suction. Spread the alginate on the back half to release it from the hair. This is where the FiberGel really shines. Since it has the best tear resistance of any alginate, the back of the mold is far less likely to tear. Slip your fingers between the bottom of the front of the mold and subject and gently lift. Instruct the subject to pull her face back and down at the same time. Have your assistant reach under the mold and help pull the hair free which tends to cling to the surface of the alginate. Do not try to yank the mold off, just apply a constant pressure and let the model pull herself out. (Photograph #11) From the time that I started mixing the first alginate to here took about 30 minutes.

While we are not quite at the "...and they lived happily ever after" part, we are halfway there. In next month's issue, I will explain how to go from a just removed mold to the classic free-standing bust shown at the beginning of this article.



Cutting a slit up the back of the Alginate with a dull instrument



Removing the rest of the mold consisting of the alginate front (1 layer) back (2 layers) and the attached plaster and cheese cloth mother mold in the front

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