



A Great New Gadget

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

On a wall in my studio is a framed list of "Dave's Laws" which was compiled by one of my assistants. There are thirteen starting with #1, "Dave is always right" and ending with "If Dave is wrong, refer to #1." In between are some tidbits that can help almost anyone along life's journey. One particularly useful one for surviving as an artist is #7. We are not like Robin Hood who stole from the rich, we steal from everyone!" In last month's Sculpture Journal, I wrote about the various body parts that are most likely cast for remuneration. (See "How Do I Cast Thee For Profit, Let Me Count The Ways.") After all, rather than just casting, say, babies' hands and feet, the more body parts one masters, the closer one is to being able to "rob from everyone." I said that in my next article I would explain how to go beyond pretty good and raise one's work to a higher level in order to grab a competitive advantage. My intention was to show some examples of life castings which are more creative than the usual. But I have decided to delay that article for another month and tell you about an exciting new gadget I have discovered.

There I was at 37,000 feet in an airliner headed to Ottawa, Canada with a stop in Philadelphia. I was getting pretty bored. There is no free lunch any more.

The person next to me had fallen asleep in spite of my stimulating conversation. I had just finished the only book I had brought along and I had elected not to pay \$5.00 to watch the obligatory "G" rated chick flick about girl gets boy after some difficulty. I had even walked back to the rear of the plane and checked the magazine rack and found only a copy of one of the racy "women's magazines" whose major article was about the 27 things any modern woman should know to do in bed besides sleep. It occurred to me that if the heroine in the in-flight movie had read that article, she could have gotten the guy a whole lot faster and had time for a couple of good motorcycle chases and I might have sprung for the \$5.00 movie. After returning to my seat, I went for my last resort, the seat pocket which offered three choices: a barf bag, the airline's self promoting in-flight magazine, and the catalog of clever but expensive gadgets. I picked the most interesting of the three, but there isn't much to read on a barf bag. The gadget catalog was next. Somewhere between the solar powered nose hair clippers and the life size, radio controlled, self destructing model of the zeppelin Hindenburg, I hit pay dirt. I was so intrigued by what I discovered that as soon as we landed in Philadelphia and the flight attendant said, "You are



Photograph #1



Photograph #2

"The fact that the "Reveo" is an excellent tool for de-airing rubber is reason enough to buy one. However, it can be used with other materials as well. I have used it with Forton MG, plaster and alginate and found that it is as effective as my much more expensive "Whip Mixer"

free to use your cell phones," I was calling Manila, Bombay, or wherever and placing an order.

So why did I get so excited? It appeared to me that the gadget in the advertisement might be very useful for eliminating bubbles which is one of the constant challenges in any kind of casting.

In 2003, I wrote four articles for Sculpture Journal on this subject. The first discussed the origins of bubbles and how to eliminate them. The second and third explained how to construct economical yet very functional vacuum and pressure chambers. Their usefulness in eliminating bubbles was covered in the fourth articles. (See: "Using Vacuums and Pressure in Casting," "Making a Vacuum Chamber," "Making a Pressure Chamber," and "Putting Vacuum and Pressure Chambers to practical Use," Sculpture Journal, August, September, October and November, 2003.)

My new discovery, while developed for a completely different use, might just function as a ready made, inexpensive vacuum chamber. It's called a "Reveo" and it is the newest thing for marinating meat. What was shown and described was an air tight clear container and a base that functions both as a vacuum pump and motorized rollers. The idea is to put some meat into the container, which is large enough to hold a chicken plus some marinade. Once attached to the base with a rubber tube, the vacuum plump removes the air from the container drawing the marinade into the meat. Then the second step is to disconnect the tube and place the container on its side and allow the rollers to tumble the meat keeping it coated in marinade. Supposedly 24 hours of marinating can be accomplished in about 10 minutes. The price is \$200.00 plus shipping and handling and is about the

same as building your own vacuum chamber but in this case you don't have to build anything.

When my "Reveo" arrived about a week after I placed the order, I just took it out of the box and after playing with it for a few minutes, was ready to give it a try. (See photograph #1) I mixed up about a pound and a half or 700 grams of thixotropic silicone rubber and dumped it into the clear container. (Photograph #2) I closed the lid, attached the vacuum line and pressed the power button followed by the "MariVac" button. The vacuum motor ran for two minutes and then automatically shut off. The rubber had expanded to about twice its original volume. (Photographs #3 and #4) I then restarted the vacuum pump and rocked the chamber back and forth through the next two minute cycle which exposed the bubbles to the surface and caused the rubber to return to its original volume. (Photograph #5) To complete the de-airing process, I twisted the knob on the top of the lid sealing in the vacuum (or more properly, preventing air from coming into the container), disconnected the hose, placed the sealed chamber on the rollers, and pressed the third button which caused the chamber to rotate. After a couple of minutes, I removed the chamber and poured the rubber into an alginate mold of a hand and into a plastic cup. After allowing the rubber to set up, I demolded both samples. The "Reveo" had de-aired the rubber perfectly. Not only were there no visible bubbles on the surface of the samples, but slicing into the rubber in the cup showed it to be a bubble free throughout.

The fact that the "Reveo" is an excellent tool for de-airing rubber is reason enough to buy one. However, it can be used with other materials as well. I



Photograph #3

have used it with Forton MG plaster and alginate and found that it is as effective as my much more expensive "Whip Mixer." While the vacuum chamber is not large, about 7 inches in diameter and eight inches tall, it can accommodate about a quart of material. In fact, the "Reveo" can de-air much larger amounts of material than can the "Whip Mixer."

One of the more useful features of the "Reveo" is that the vacuum vessel can be lifted and rocked back and forth to help the air to escape. This can be important to speed up the de-airing with fast setting materials. Also, if the material has a high viscosity such as thixotropic rubbers, reducing the air pressure will cause the air to come out of the solution and the bubbles to expand but the bubbles may not be able to rise to the surface and escape on their own. High altitudes, such as in Denver where I live and work, exacerbates the problem. The turning over and over of the container on the rollers helps to get rid of the air.

As with any container, cleaning up after mixing rubber is a snap. Just let the rubber set up and pull it out. But because the vacuum vessel is not flexible, materials that harden such as plaster, Forton MG, etc. should be washed out immediately after mixing and not allowed to harden even though these materials don't seem to stick to the container. If you were concerned that a particular material might permanently stick to the vessel and damaging it, you could put a smaller container into the vacuum chamber and not turn it on its side and use the rollers. Complete vacuum chambers including lids are only \$22.00 each, plus shipping. I would suggest that an extra one be ordered with the "Reveo" to keep as a spare. I ordered two just in case, but so far have had no problems.

The lid simply fits on snugly and draws down tightly as the vacuum forms. While I have been able to remove the lid after air is allowed back into it, the easiest way to do so is to blow compressed air in through the hole where the vacuum line attaches which



Photograph #4

causes the lid to pop off.

Using a vacuum gauge, I found that the built-in vacuum pump pulls just over 20 inches of mercury. While I can get several more inches with my home made vacuum chamber, which I described in one of the articles mentioned previously in the third paragraph in this article, 20 inches seems to be adequate. I suspect at sea level one would get about 5 more inches of mercury.

I am so impressed with my "Reveo" that I urge anyone who doesn't already have the capability of de-airing materials, to acquire one.

On my next flight, I plan on taking a closer look at some of the other gadgets in the catalog. I'll bet there is a use around my studio for a solar powered nose hair trimmer; I just haven't figured it out yet.



Photograph #5

The "Reveo" is manufactured by: Eastman Outdoors
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