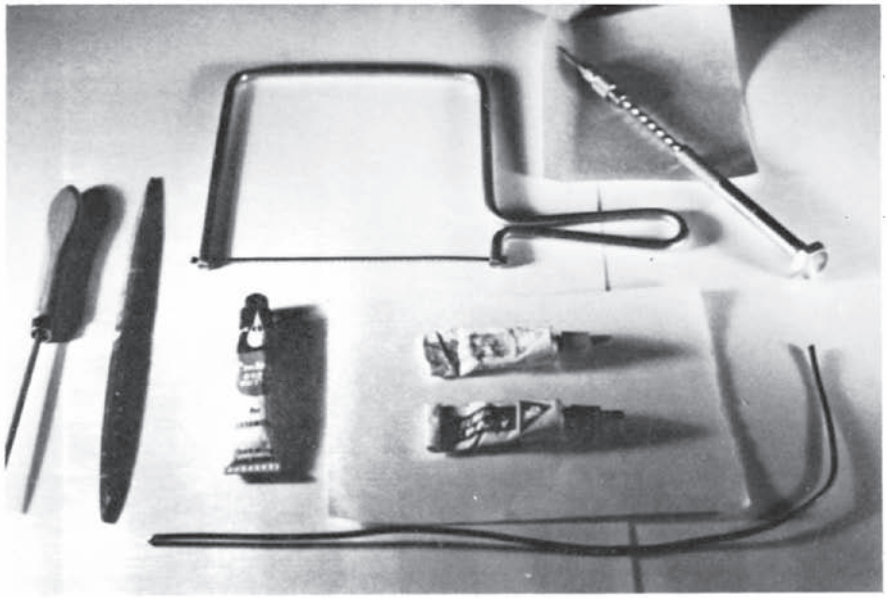

Figure 1 - In constructing our elephants into performing elephants or those used for the long mound, the above tools and material will be needed for best results.

One of the most impressive sights in the circus is the long mount, walking or standing. Seeing tons upon tons of elephantine flesh, towering high over one's head seems to create a certain aura of grandeur!

To date, I have not seen many long mounts in 1/2 or larger scales. This article, I hope, will correct this deficiency. Although this is entitled 1/2 inch, it can he used successfully in larger and smaller scales. The main concern will he if the animal is plastic or not. This article contains tried and true methods for working with plastic (brittle type, not rubbery) but makes no claims about any other substances. Also, this process can be adopted to make performing elephants and other animals as well. Study pictures of real animals (as many different photos as possible) before attempting a certain position, as it might look all right in your mind's eye, but the end result might look grotesquely misformed! A horse will be easier to reform than a zebra will because of the repainting, keep this in mind!!!

Getting back to the present task, you will need a few tools and glue (Fig. 1) For glue I recommend Elmer's Epoxy, as it is thick and will not run and dribble. I have had the best luck with this brand. Also plastic filler will be necessary. At least one tube will be needed per elephant, maybe more. I find Pactra Body Putty works very well and can be obtained almost anywhere. Thin copper tubing works best, for the joints, but brass tubing 1/8 inch thick will do the job, as will thick coat hangers in a pinch. Aluminum tubing is too soft and flexible for this job, however.

Let me repeat my warning from previous articles on plastic - STAY AWAY FROM ELECTRIC POWER TOOLS!! Stick to hand controlled tools when working with plastic. High speeds will warm and melt the plastic in a very short time. A small punch drill is needed, although an eggbeater drill can be used. The punch drill is easier to work with because it needs only one hand. A hand jig-saw is needed rather than a razor saw as there will be deep cuts to make which a razor saw couldn't handle. A file and some sandpaper round out the list of essential tools for this project, but get a file brush if you don't already have one the plastic and body putty tend to gunk up a file pretty bad. The elephant I use is made by the Breyer Molding Co., 222 North Maplewood Avenue, Chicago, Illinois 60612, and can be obtained from their distributor, Bentley Sales Company, 805 River Terrace Drive, McHenry, Illinois 60050. The Circus World Museum in Baraboo, also stocks this elephant. ***[This plan was written in 1972. I am not sure that Breyer Molding still produces these elephants. – Superintendent of Plans, Feb. 2003]*** When ordering ask for "ELEPHANT MODEL #91" (Fig. 2). You will need at least 2 elephants to begin the mount with. One will be the lead elephant on all four legs, which you won't cut up. The other is the one you will be reworking.

Before cutting it up, file all of the seam joints and clean out the flesh around the mouth. There is very little of this, but you can't get away from it completely. The next step is

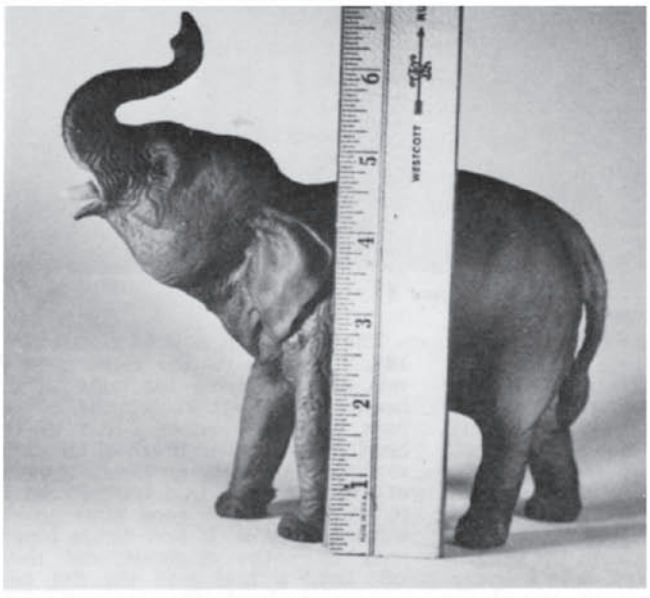

Figure 2

Constructing 1/2" Scale Performing Elephants & Walking Long Mount			
DATE: None	SCALE: 1/2" = 1'	SCANNED & REVISED: 02/06/03	Pg 1 of 5
Circus Model Builders			
Drawn By Jim Petersen			DRAWING NUMBER #0223

© Copyright 2000-2007 by Circus Model Builders, Inc.

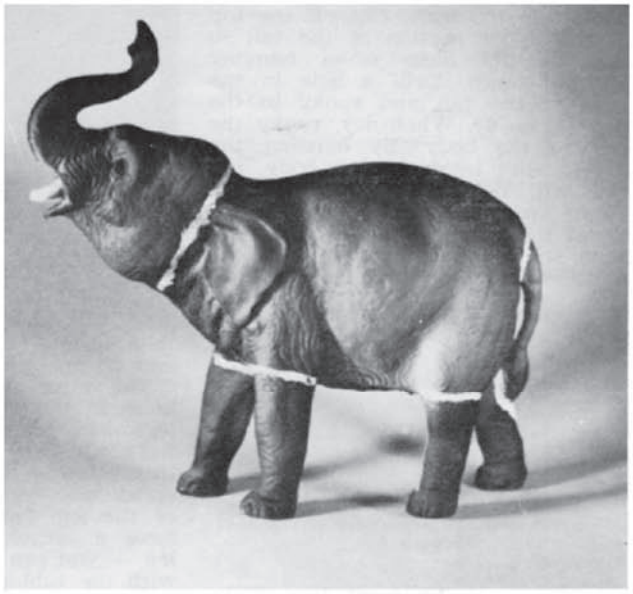

Figure 3

to dissect the elephant, following the lines in Fig 3. This looks like ruining a perfectly fine elephant, but go ahead and do it. A word of caution though, be sure to tag each leg as you remove it. Otherwise you will have a rough time figuring out which one belongs where, when you begin re-assembling the elephant. For these photos, however, the tags were removed. Cut the legs as close to the body as possible. Mistakes can be taken care of later. The tail must be cut in two places to remove it (Fig. 4). This will have to be reshaped, on both ends with a file.

Now you are ready to attack the rear legs. Trim off about 1/8 to 1/4 of an inch off the top of the leg. If used as is they will be too long. Drill a hole in the center of the top of each leg (Fig. 5) and epoxy in your tubing and let set over night. During the project this might seem like a lot of setting and drying over night, but if you are doing 3 or more elephants at a time, this is plenty for one night's work.

Next drill a hole in the body where the legs were and will be re-

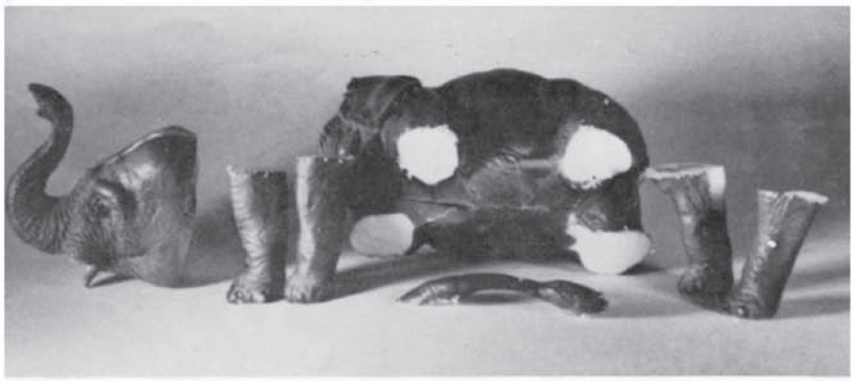

Figure 4

attached. You will probably drill completely through the body, however if the tubing fits snugly in the hole, this will present no problem. Smear a lot of epoxy around the tubing once it is inside the body. Position the legs for either a standing or walking position. Smear a lot of epoxy on the tubing between the body and the leg, and let set. If your tubing seems springy, or too thin, use 2 or 3 pieces per leg instead of only one. Next fill in both gaps with body putty, a thin layer at a time and slowly build up again to overflowing the seams. File gently and sandpaper carefully. You may find that you don't have the proper contour on the legs a little experimenting will make the legs look perfect. A picture of the real thing always helps

The tail is attached in the same

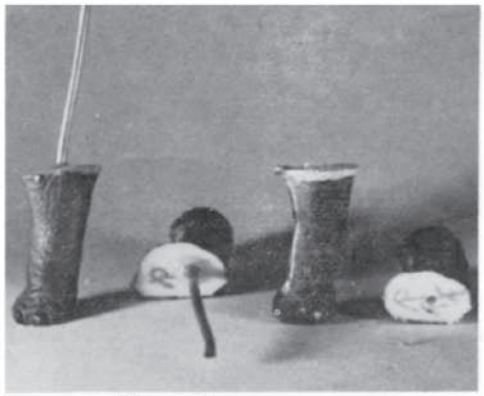

Figure 5

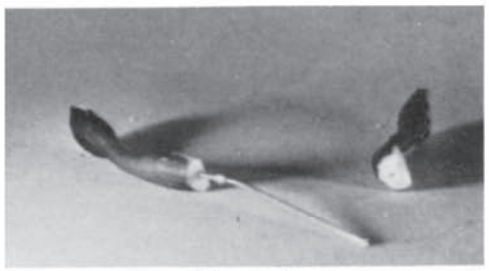

Figure 6

manner, except you should use a smaller diameter, stiff wire to connect it to the body. Cut off the top of the upper portion of the tail so that it fits flush when hanging straight down. Drill a hole in the base of the tail and epoxy in the wire (Fig. 6). When dry, epoxy the tail to the body. By bending the excess wire inside of the body, the tail will hold its position. Again, smear epoxy on the wire in the gap. Cover the epoxy with body filler, and sand smooth. It's beginning to look a little like an elephant (Fig. 7).

Now come the front legs. Take

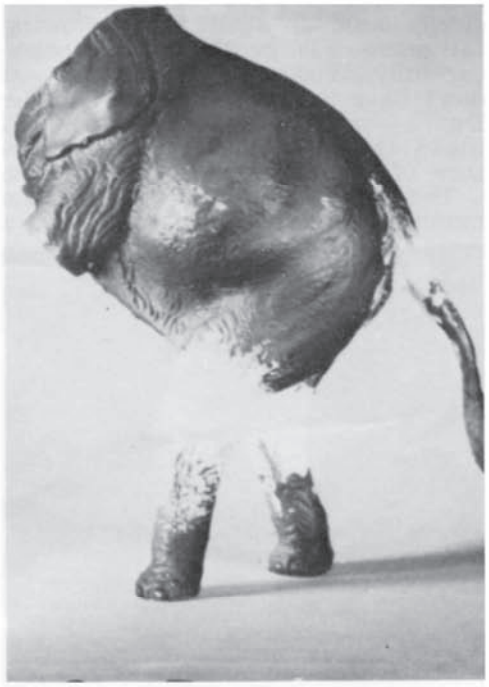

Figure 7

© Copyright 2000-2007 by Circus Model Builders, Inc.

Constructing 1/2" Scale Performing Elephants & Walking Long Mount

SCALE: 1/2" = 1'

SCANNED & REVISED: 02/06/03

DRAWING NUMBER #0223

Figure 8

both legs and cut them at about the knee. Trim about one quarter inch off the right thigh only, not both (Fig. 8). Be sure to tag all four pieces, so that in re-assembling, the proper thigh, (upper) is attached to the proper shin (lower piece). Before epoxying, check the legs for roundness. They tend to flare outwards near the tops and it is easier to trim

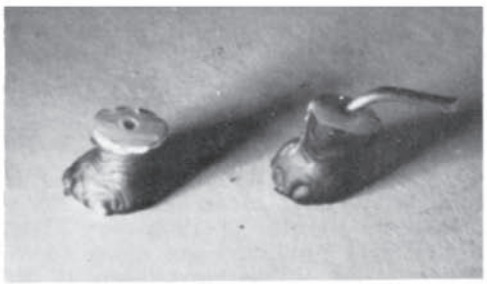

Figure 9

them now before they are re-attached. Trim off about 1/8 of an inch from the kneecap - this will be made up for in the bend of the legs - if not done, the legs appear too long! Drill a hole in the top of the shin (lower leg) and epoxy the tubing for both feet (Fig. 9). Now bend the tubing (Fig. 10) and drill a hole in the thigh (upper leg) at both ends, and rejoin the upper and lower legs with plenty of epoxy between. I prefer to wait with the body putty until the legs are joined to the body and then fill in all the spaces on the front legs at one time.

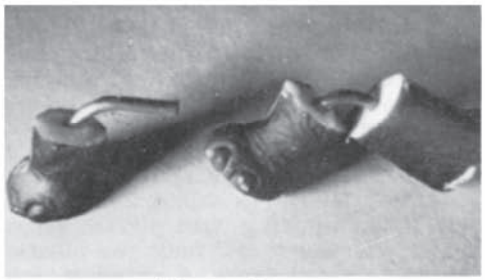

Figure 10

The next step, then, is to drill holes in the body where both front legs will be remounted (Fig. 11). Attach a piece of tubing to the hole in the top of the legs (Fig. 12) with epoxy and bend it to fit the curve of the leg. Notice the left leg will have a larger gap than the right leg - you can match up the lengths with the tubing. Now, before epoxying the front legs, check the stance of the elephant, by placing it behind an untouched elephant, which has all four legs untouched (Fig. 13).

The angle of the first standing elephant will be just a little different than the rest, so mark him in some way so he will always be easy to recognize as the first one on two feet. Again, refer to the many pictures of long mounts in books and programs for a natural position. When you are satisfied with the bends, bend over the excess tubing inside the body and epoxy both inside and out, covering both pieces of tubing on both legs with plenty of epoxy. Fill in with body putty in thin layers and sand to a smooth finish.

The head must now be re-cut (Fig. 14). The head on the right is as it was removed from the body - the head on the left shows the cut-off part behind it. After I cut it, the head was still at too much of an angle, so I re-cut the neck on the body (rear of Fig. 14), with that wedge next to it. This is also a good time to rework the tusks. If you desire longer ones than the originals, cut them off. Drill a hole into the flat part left on the head (Fig. 15) and epoxy a stiff piece of wire into it and set it aside to dry for a day. The next day shape your new tusks out of small doweling (use your own judgment as to thickness and length) and drill a small hole in the center of the part of the tusk to be butted to the head. Epoxy the tusk to the previously inserted wire and let dry. Then, when completely dry, file off any excess glue and fill in any cracks in the seams. I prefer not to have any tusks at all except on one or two of the elephants, so I just cut off the originals and file them smooth, and flush with the cheeks.

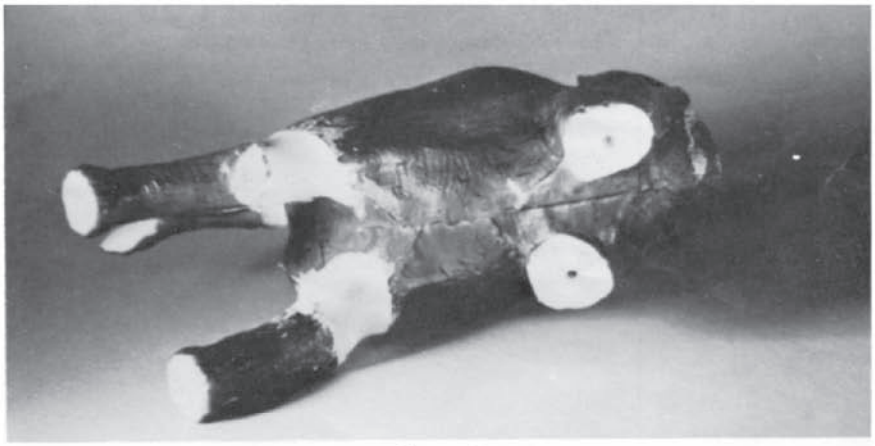

Figure 11

The trunk can also be repositioned, as it is hollow most of the way. Use the same method for repositioning the trunk as used for the rear legs. However, this is not necessary for the second to the end animals in the long mount, as the trunk is curled perfectly for this purpose as it is. A shift here and there will dispel the same exactly matching form, though.

Now check the head for fit

© Copyright 2000-2007 by Circus Model Builders, Inc.

against the body (Fig. 16). With the elephant on the back of the lead one, check the tilt of the head. If it looks too high, cut off another wedge piece as in (Fig. 14). When it looks right, epoxy the head back to the body. Let this stand and harden again, for a day. Don't be stingy with the epoxy. The outside seam around the chin can be smoothed with a toothpick while still wet if too much is outside, but inside the body, the more used, the better the bond. There is nothing worse than finishing the model and having the head or leg seam crack because of too little glue!!

Next fill in the gap at the top of the head (Fig. 17) with plastic body putty or filler. Apply this like you would pile several layers of toothpaste on a toothbrush. Don't even think of applying this until the epoxy has hardened. After the main hole is filled in and has dried, more putty can be added to fill in the cracks and small spaces that will occur during the setting process. Make sure that you overfill the spaces over the seams. It's easier to blend in when you begin filing or sanding. Air bubbles might occur once you begin sanding, but can be filled in by putting a dab of body putty on a fingertip and rubbing the fingertip over the crevice. If the head seam does crack during your filing, sometimes a touch of epoxy on the crack, worked in if possible, will save you a lot of rebuilding.

When completely finished, a quick coat of spray grey primer will show up any imperfections in the body putty such as missed air pockets, cracks and scratches. If you desire, now is a good time to scribe the body putty so it will resemble the wrinkled skin of the rest of the elephant. Now you are ready to paint.

Again I stress the importance of using a flat base paint did you ever see a shiny elephant, other than one that just had a good bath?? Coloring I leave up to you. Remember that if you mix several colors to obtain "the perfect elephant grey" be very careful about recording the EXACT

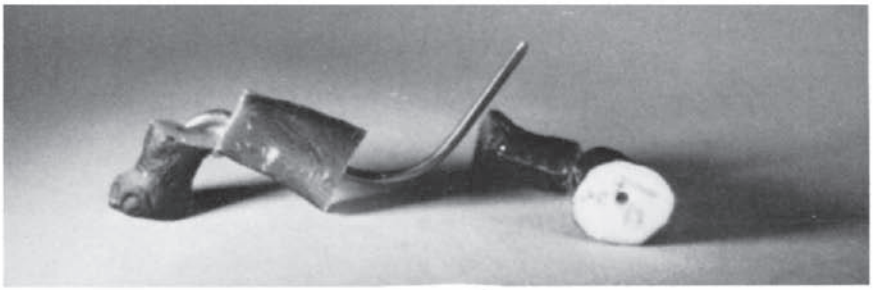

Figure 12

Figure 13

Figure 14

Figure 15

© Copyright 2000-2007 by Circus Model Builders, Inc.

amounts of each color, as you might not be painting all the elephants at one time.

Don't forget to add headbands for the elephants. To date my herd have none, as I am waiting to do the whole set at once, and have not finished all the elephants I want in my mount (Fig. 18). Handlers and some spec girls walking beside and riding on will help to present a realistic model.

Finally, a word on performing models. Motors can be concealed inside of the hollow bodies to move heads, twitch legs and swish tails. The wires can be run out of a hollowed leg. Trunks can be made to move. The possibilities are endless, and are restricted only by your imagination. How about a handler shoveling elephant mahooga???

Figure 16

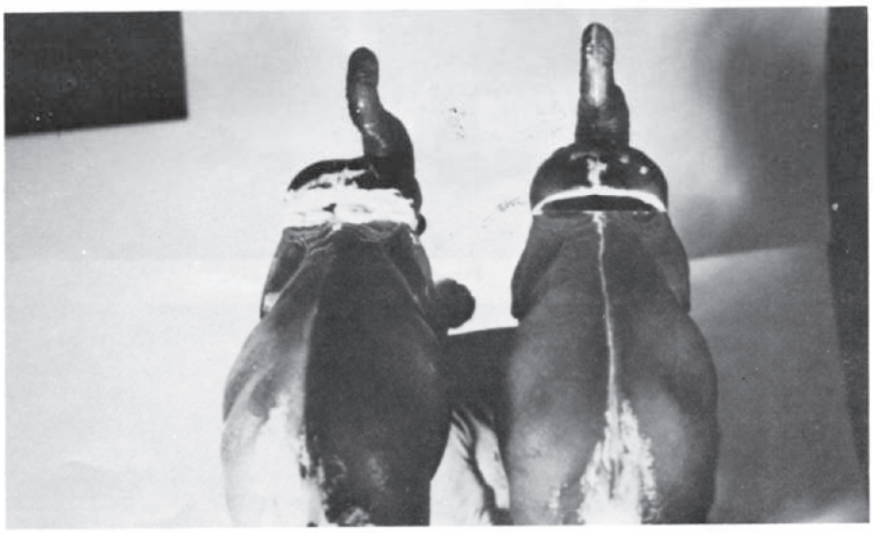

Figure 17

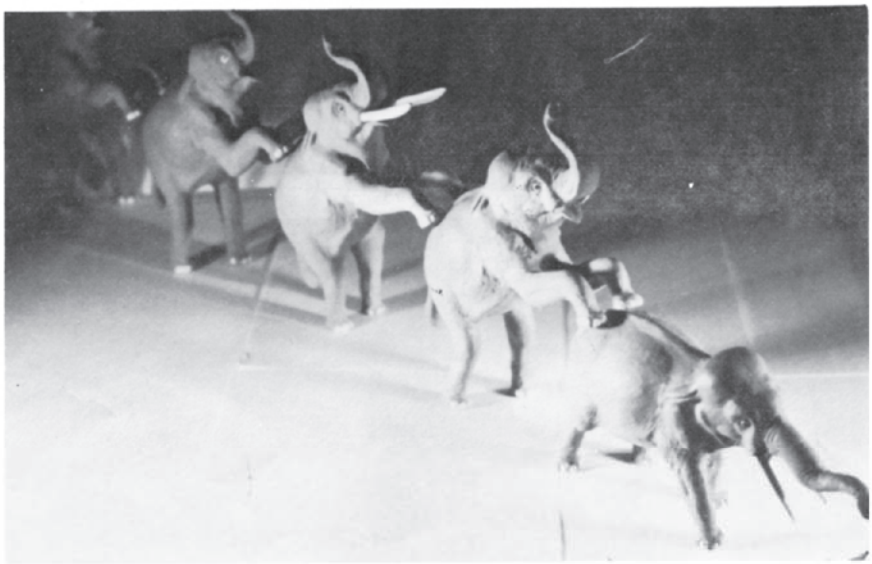

Figure 18

© Copyright 2000-2007 by Circus Model Builders, Inc.

Constructing 1/2" Scale Performing Elephants & Walking Long Mount

SCALE: 1/2" = 1'

SCANNED & REVISED: 02/06/03

DRAWING NUMBER #0223