

**SUPERVISOR OF PLANS NOTE:** Please remember that this article was written in 1971. Some or all of the items mentioned may no longer exist, or have significantly increased in cost. In some case modern substitutes may be available as well as more modern sculpting materials. Please use this plan as a general concept guide, not as exact method.

1971 EDITOR'S NOTE: While this article is written for 1/2" scale, these same figures are available in 1/4" and 1/8" so the same basic article could be used for all three scales.

Half-inch scale is one of the roughest scales to model circus in, because of the lack of proper sized figures. Unless one is good at carving, most 1/2" figures come from the toy store and many times the quality of these figures, plus inconsistent sizes, leaves much to be desired.

After several years of experimenting, I have finally found a suitable dime-store figure which has good, clean features, the proper size, unlimited possibilities and low price. I am referring to the dime-store "Bride and Groom" figures used on wedding cakes. They are separate figures and go for 19¢ to 29¢ depending on the store. They are plastic and easy to work with (see Fig. No. 1). The brides can be used for various acts, but the lack of legs, (the lower portion of the figure is a hollow skirt) limits some



Figure 1 - Original Figure

of the potential of them.

The Groom dolls are perfect for reworking, and it is these figures that this article will concern itself with. The reworking process involves very few tools and thus eliminates the need for any fancy and expensive equipment. To begin work you will need the following:

1. A Razor saw: A very thin blade is needed for the cutting you will do. Jig saw blades tend to be too thick, and electric jigsaws melt the plastic too much.

2. Files: Preferably one for roughing and a fine one for smoothing. A stiff

wire brush is also advisable for the plastic is warm when being filed, but if it hardens in the file grooves, the file will be very difficult to clean. Therefore, be sure to brush your files after you finish using them.

3. Sandpaper: A fine grade, or possibly emery cloth for touch-up and finish work.

4. Small hand-punch drill: For drilling small holes in the hands for whips, balloons, etc. Again, an electric drill (without a reostat foot pedal) goes too fast and melts the plastic. The drill is not needed for many figures and should be considered optional.

5. Plastic airplane glue: The 10¢ hobby store tubes.

6. Epoxy: Any brand will do.

7. Plastic filler: Again from the hobby store. This is used by model car builders to conceal the seams in joined pieces. This filler is marvelous for covering up saw slips. A tube runs about 25¢ and is better than plastic wood, or wood filler because of its similar plastic quality when being filed and sanded. This is about all that is needed, unless I might suggest a rubber filing block, as these figures are small, and the rubber will help to keep them from slipping when you are filing or sawing on them.

There are also some small accessories which can be used on these figures. Cowboy hats, top hats and similar plastic parts are usually available at the same store which sells the figures. These hats come in packages of 6-8 pieces for about 39¢. If you plan to make any ringmasters the top hats might be necessary, if you don't care to make hats out of dowels or scrap wood.

I also suggest that you buy 5 or 6 figures, at one time, for two reasons: 1. You might want to experiment or make a mistake on a figure, and it's better to have a few extra on hand, 2. You might want to start or work on several at once, as the glue or body putty sets best

overnight.

The first figure I will describe will be a ringmaster, or animal trainer, depending on the use of the top hat.

Step No. 1. Cut off the plastic, heart-shaped base of the figure with your razor saw. File the feet so that the figure will stand by itself. Next, file the 'seams' or places on the sides of the body where the halves were joined in the mold. These figures also have some company printing on the back of the jacket. Remove these markings also. (See Figure 2.)

Step No. 2. Drill (hand drill) a small hole in the left hand about half-way into the hand. The hole should be big enough to fit a piece of door-bell wire snugly into it.

Step No. 3. Take a piece of door-bell wire about 7-9 inches long. Strip off all but 3 inches of the rubber shielding on the wire. Straighten out the 3" portion as it will be the handle of his whip. The rest of the bared wire can be formed to simulate the rest of the whip being coiled on the ground to suit your needs, and cut to your desired length. Next epoxy (contact cement doesn't work as good) the end of the whip handle into the previously drilled hand hole, and allow to dry at least overnight.

Step No. 4. This step is optional. Glue one of the plastic hats onto the head taking care to watch out for glue dribbles this looks bad on a finished figure. A wooden hat could be made from a dowel just a little bigger in diameter than the head.

Drill out one end of the dowel to fit on the head. Then add a very thin piece of dowel about 1 1/2 to 2 times as large as the original dowel's diameter, for the hat's brim. Then, when all the glue has dried, paint the figure, in flats or enamels, and your ringmaster is ready

## Custom Made 1/2" Scale Figures

DATE: None

SCALE: 1/2" = 1'

SCANNED & REVISED:  
12/27/2005

Pg 1 of 3

# Circus Model Builders

Drawn By  
Jim Peterson

DRAWING NUMBER

#0216

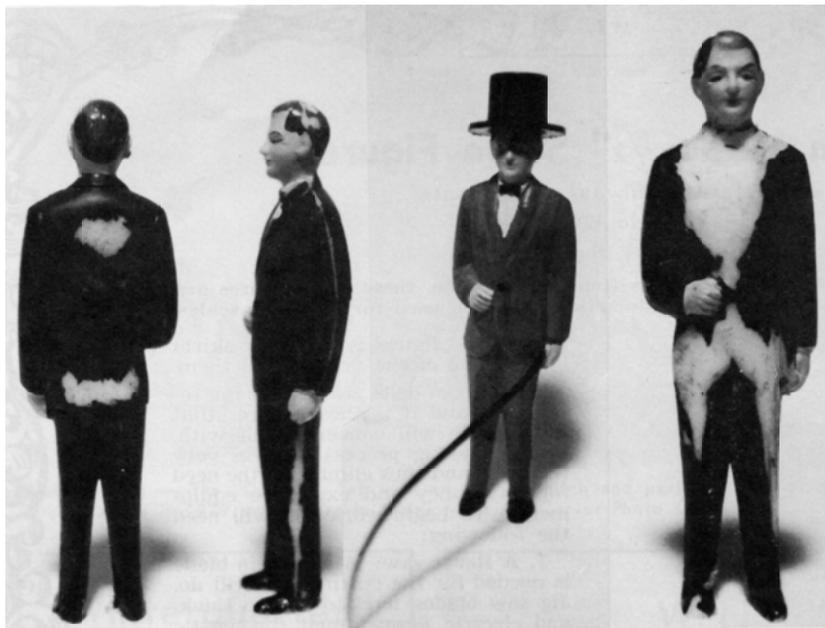


Figure 2

Figure 3

Figure 4

for the big show. (See fig. No. 3.)

Now I would like to show you how to remove one arm and re-position the head of a figure. Remember that I am using specific examples in this article. These plans will make an "Unus" or a fire eater. These are my ideas, and I am sure you can think of other figures which could use like positions. Be original, and let your imagination guide you. To begin this figure, follow the previous Step No. 1. In some cases you might not want your figure to look so formal.

The bow tie and jacket lapels can be filed off (see Fig. No. 4), and a plain shirt can be painted on later. Now you are ready to modify your figure.

Step No. 5. Lay the figure face up on the filing block with the head pointed towards you. Begin sawing the left arm at the seam where it joins the body. Angle your saw blade so you cut into the body, other-wise the, arm will be too thin if you cut at a 90° angle. Slow, steady strokes will keep the blade from "freezing" in the plastic. After the arm has been completely removed, round off the edges by filing, then sanding, to preserve the rounded jacket sleeve. Do the same to the hand and pointed edges on the body. If you cut too much out of the body, on the arm, fill it in with the plastic body filler. Be sure to put on a little more than you need (for small areas only) as it can always be filed off if there is too much. If you put on too little you will lose a day by having to add more filler and letting it dry overnight

Step No. 6. This step concerns "Unus" (if you are making a fire eater go on to

Step No. 7). Cut off the head flush with the collar. File down the neck at the back of the head so the head will be looking straight up (as nearly as possible). Then glue the head back to the body, checking fit and adding body putty if necessary. Next drill a small hole in the left hand right where the fore-finger would be, about 1/2 inch deep, into the wrist. Take a small piece

of stiff (piano wire works good) and epoxy it into the hole. Allow this to dry overnight. Next glue the arm hack onto the body in such a way as to balance the body on the finger (see fig. No. 5). After the arm has dried paint the figure and mount it on a globe (a small wooden ball, painted white will do nicely) and glue the globe to a small table or pole as in Unus's act.

Step. No. 7. This fire-eater (see Fig. No. 6) has a sombrero hat as I modeled "Carlos" the Mexican fire-eater. Cut the head off at the collar and file the back of the neck so the head slants back looking at about where his hand would be if it were raised straight up. Re-glue the head to the body. Next take a piece of wire or a toothpick and epoxy it to the palm of his hand. A small piece of cotton should be glued on the torch end to simulate flames. Now glue the arm back to the body so that the end of the torch ends up in line with his eyes. Now paint the figure according to your preference.

With these steps you can also make ticket takers, peanut and cotton candy vendors, a magician (see Fig. No. 7) a two-headed man, and other figures too numerous to mention. Turn some of the heads facing to the sides to break up the monotony of them looking the same.

The next figure involves the removal of both arms. Follow the previous steps No. 1 and No. 5. To remove the right arm and make a cut into the arm parallel to the forearm, just above the elbow. Cut

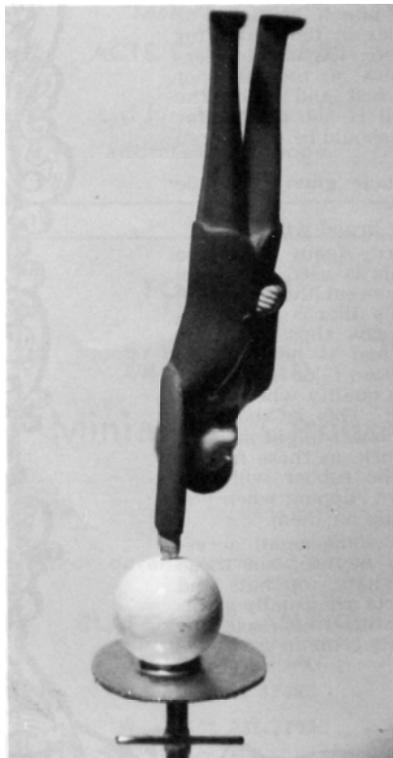


Figure 5 - One Finger Stand

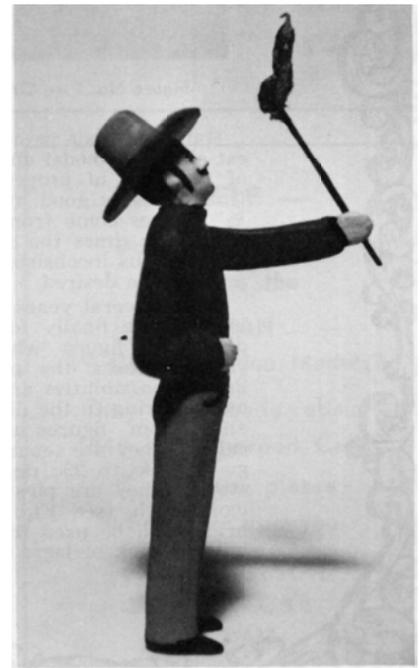


Figure 6 - Fire Eater

## Custom Made 1/2" Scale Figures

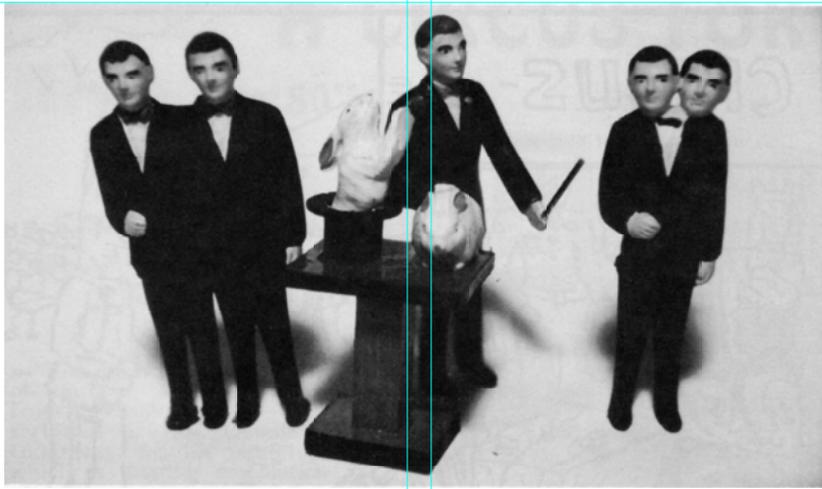
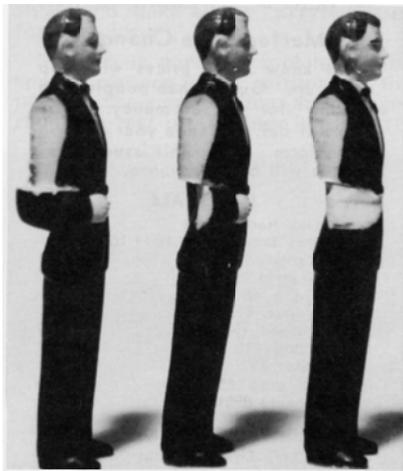


Figure 7 - Siamese Twins, Magician, Two-headed Man

a little way into the side deeper than the arm is. This saw cut will later be filled in with body putty. Next place the saw blade at the top of the shoulder and cut down the body until you meet the first cut. (See fig. No. 8.) Remove this piece of the arm. Next cut off the elbow angling the blade away from the body as

Then file a flat space on the middle piece so the third piece can be joined in a straight line, and glue to parts 1 and 2. (See fig. No. 12.) After these pieces have set, cover the two gaps between the pieces with body putty. Don't give up - it's not as hopeless as it looks. When the putty has dried file and sand so that the right arm will match the left arm in thickness. The lengths should be the same. Now you have two arms to put on as you desire. The wrists can be cut, and bent in as can the arms to bend at the elbows. For best results, start with both arms straight, before you try cutting the



Figures 8, 9 and 10

you cut (see fig. No. 9). Remove this piece of the arm. Lastly, gently slide the blade back and forth below the hand and forearm, saw teeth facing the head, until a groove is achieved. This part of the arm is not straight, and will require careful cutting to salvage this part of the arm. (See fig. No. 10.) After all three pieces of the arm have been removed, smooth out the body by rough filing and then filling in the body with body filler. Take the first piece of the arm you removed and glue it back in place with the second piece exactly as they were before you cut them (see fig. No. 11).



Figures 11 and 12



Figure 13 - Clown

arms to bend at the elbow. I made a clown with two straight arms holding a styrofoam balloon. (See figure No. 13.) I mention the clown for two reasons. The balloon is a piece of round styrofoam which is light and will not off-set the balance of the figure, even when holding it away from his body.

The other reason is his hair. All that it is, is cotton shaped and cut, then glued to the head. Cotton can also be used for beards or goatees, (see figs. Nos. 14, 15) for bearded ladies or barkers. If you do have a beard on a figure, don't neglect to paint on a big heavy handle-bar mustache, with bushy eyebrows and shaggy sideburns. These details help to make individuals out of your figures. A great pair of Siamese Twins can be made by simply cutting off the left arm of one figure, and the right of another. (See fig. No. 7.) Glue them together and fill in the gap between them with body putty. The arms that were cut off can be moved as desired.



Figure 14 - Bearded Barker



Figure 15 - People for your "Spec"

## Custom Made 1/2" Scale Figures