
Santa Fe
1216

When viewed from a distance, the artificial mountain made using the author's technique recedes into the background. The mountain's color and texturing were designed to blend well with the natural rock across the track from it.

Garden railway design

Hiding an ugly fence with gulapata

by Jack Verducci | San Mateo, California
Photos by the author unless otherwise noted

Sometimes before you can even begin a railroad you have to deal with the background. This was the case with Mark Samson's line. A trackplan similar to the one used at Ken Kirkorian's (shown in the October *GR*) was used at Mark's. In this case, though, the yard was much smaller and there was no room for a pathway along the back side of the railroad. In fact, the railroad runs right up to the back fence.

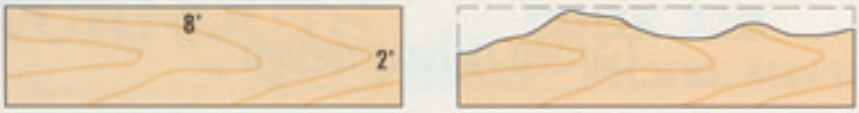
Mark's yard is lower than his neighbors', so his back fence is a combination fence and retaining wall. The lower part of the fence displayed an unattractive combination of roots, ugly dirt, and gaps. There was limited room in which to build the railroad, so we decided that using real rocks for a background would take up too much room. (In order to make a rock structure high enough to cover all the bad spots in the fence, it would have to extend several feet into the yard to form a solid base. This would have cut too far into the railroad space.)

The challenge, then, was to come up with a solution that would hide the lower part of the fence, not take up too much railroad real estate, and blend into the railroad. A painted backdrop would not have worked because the lower area being covered was so uneven. Here is what we came up with.

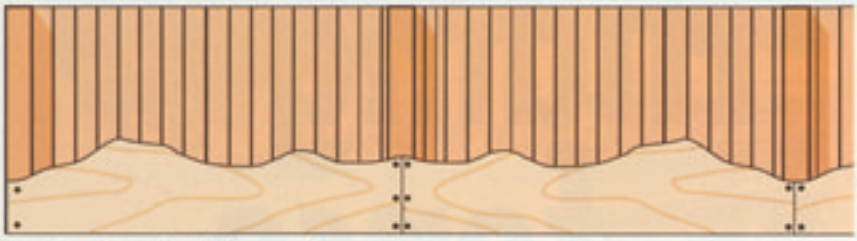
Using plywood, we made a frame that would become a horizon line. A saber saw was used to cut the pattern (fig. 1), which, in this case, was freeform.

Next, the plywood was fastened to the fence with screws. At this point, we had a two-dimensional mountain range. We then stapled metal mesh to the plywood. The mesh runs from the top of the plywood to the ground. We used a tight mesh (aluminum bug screen) as a first layer, then put stucco netting over that. The fine screen kept the material from falling through and the stucco netting provided strength for the finished product. The bottom of the mountain was puffed out using scrap (empty cement sacks, in this case). This would not be seen and is only needed to hold the form away from the wall while the stucco cured.

The next step was to use stucco to completely coat the wire mesh. This served as the base upon which the balance of the scenery would be built (fig. 2). The coating was made 1"-2" thick. The stucco was mixed according to the instructions, then troweled onto the wire.



Using a half sheet of 3/4" plywood, cut away the outline of the mountains with a saber saw.



Screw the plywood to the fence to form the frame.

Fig. 1. Making a plywood frame for a gulapata background

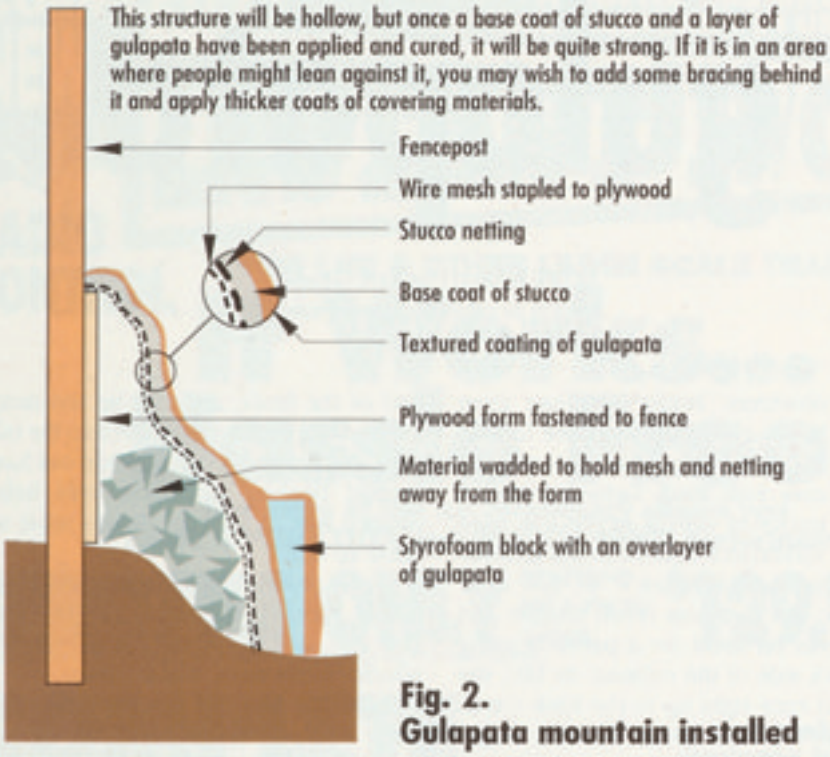


Fig. 2. Gulapata mountain installed

Tools for making gulapata mountains

- **A cement mixer.** This is not a luxury. If you are mixing more than two or three sacks, it will be worth your while to rent one if you do not own one. A rental is about $20 a day. The back you save may be your own.
- **Plastic cups or wide-mouth jars** to hold the dyes. You must be able to put your brush into the cup.
- **4" paint brush** for applying the mixture and sculpting
- **2" paint brush** for sculpting
- **Sponges** for texturing
- **Stiff parts-cleaning brush or stencil brush** for texturing
- **Lining trowel** for making age cracks
- **Flour sifter** to remove the lumps from the dye
- **Material scoop**
- **Buckets** to carry the mixture and for water
- **Small garden sprayer**
- **Garden hose** with shut-off nozzle for cleanup and cement mixing
- **Rubber gloves**

It is not important to be neat at this point. In fact, the rougher the finish, the better. You can use a wire brush or similar tool to make scratches or lines in the stucco. This will help the next coat stick.

We let the first coat cure overnight. Then came the fun part. We wanted the scenery to resemble that of Colorado or the Southwest. The method I use is one I worked out myself, based on experience obtained while building indoor train layouts. I thought it would be relatively easy to adapt some of those techniques for outdoor use, but I had to come up with a sculpting compound that would stand up to the elements.

Gulapata

I made up the word "gulapata" (pronounced "g-LOP-ata") for my my mixture because that is what it looks like to me. The basic formula is this: one 60-pound sack of ready-mixed mortar, one level shovel of fire clay, one level shovel of hydrated lime, and a 1/2-shovel of Portland cement. What you end up with is a creamy, sticky mixture that can be spread over the base coat of stucco. The fire clay makes the mixture sticky, the lime is used to reduce the ratio of sand in the mix, and the cement fortifies the mixture.

I have found that the mixture will work with just fire clay, but the lime improves the workability. The reason you may want to omit the lime is that it is only available in large sacks.Using too much Portland cement will cause the mixture to crack. This is not all bad, if you want this effect. Portland cement can also be left out if you are using fire clay only.

The areas shown in the photos were done with the mixture using all of the ingredients. Gulapata can be spread with standard masonry tools, such as trowels. I use a scoop and a large paint brush to spread it on like really thick cake frosting. Before applying it to the base surface, I wet the area down. This helps the new coat stick to the old one. Plan your work in small areas.

This is a two-person job; one to tend the cement mixer and one to be the artist. The trick is in the application. Just about any tool can be use to sculpt and shape this mixture to look like rocks. Some of my favorite tools are a 4" paint brush for general spreading of the material, a 2" paint brush for shaping and teasing, and a stiff-bristled parts-cleaning brush or stencil brush for creating rough textures. A sponge can be used to smooth areas or rough them up, depending on its texture.

The proposed site of the railway had little to recommend it. A way had to be found to disguise the unattractive fence.

You may want to use styrofoam to build out certain areas of your formations. When doing this, cover the foam completely with the mixture and it will become as hard as concrete.

Without the benefit of moving pictures it is difficult to describe exactly how to sculpt this material, so you must use your imagination and practice. Upward strokes can be made to look like water-washed or eroded rock faces. A small trowel can be used to make a layered rock.

Another method is to use lay-over molds. These are latex-rubber molds of actual rocks that have a desired texture. Lay the mold lightly over the wet mixture. When you pull it back, the impression of the rock will be left in the wet surface.

Timing is important. The mixture will start to harden a little after 15 or 20 minutes, depending on the weather. This is the best time to add texture. If you do it too soon, the mixture will stick to the mold or the tools. If you wait too long, the amount of detail you can create will be diminished because the mixture will be too hard to work.

Experiment with this process. If you don't like the results, you can remove the work or cement over it and start again.

Color

Color is the key to aesthetic success. Without it, the mountain will look like gray cement. A base color should be chosen depending on your goals. In the example shown, we added oxide-brown concrete dye to the gulapata as it was being mixed. You can use either powdered or liquid dye in this step. If you use powder, mix it into a bucket of water. Then add it to the dry gulapata mix to color the entire mixture. There should be no gray showing.

The next step in the process is the most fun and the dirtiest: adding the color to the surface of the textured area. Here you must use dry concrete dye, which comes in a variety of colors. I use carbon black, red, chocolate brown, oxide brown, buff or adobe, and yellow. The names may vary, so you may have to look at the dye itself to see if it is what you want.

Using the dye is tricky. It must be applied while the gulapata is still wet. If

Sheer, rocky walls form this canyon. Again, the artificial scenery is blended with natural stonework.

Marc Horovitz

Color is important. The basic material has dye mixed in to give it a base color. In the finishing process, powdered concrete dye was sprinkled on the work to give it a variety of subtle hues. Coloration for this project was chosen to suggest a Southwestern environment. Colors hold up well outdoors—the gulapata in this photo is two years old, yet it still looks realistic.

Lay-over molds

Making a rock mold is accomplished by first selecting a rock that has the right texture. If you look closely, you will notice that nature repeats itself in miniature. The face of a smaller rock will often look similar to that of a larger rock formation.

To make a mold, paint the master rock with several layers of latex molding rubber (available at hobby and craft stores). Complete instructions will be on the bottle. When the rubber cures, peel it off of the rock. Now you have a mold.

These types of molds are use to make plaster rocks on indoor model railroads. A mold would be filled with plaster, then, when semi-cured, placed onto the area to be scenicked.

Outdoors, we use this as a lay-over mold, placed over wet cement to add texture. Bearing this in mind, do not create a mold with deep sides or edges.

Similar molds can be made using wrinkled aluminum foil or plastic wrap, a gunny sack, newspapers, or anything else that would create a rough and varied texture. Have fun with this!

If you find that the mold sticks to the work or pulls off the cement, the cement may be too wet to work with. Wait a little for it to set up. Sometimes a coating of talc will help prevent sticking.

you brush it on you will destroy the texture that you have put in. The trick is to sprinkle on the dye without touching the gulapata. One method is to use a dry brush. Dip the brush into the dye, then use a flicking motion to fling it onto the surface. Another way is to sprinkle it on (messy). If you have a helper, one person can blow the dye on using a hair dryer set on low speed, no heat (very messy).

A different technique is to apply the dry color as you sculpt, using the same brush to color and sculpt. The sprinkled-on method, however, results in a striking finish. You end up with a natural-looking rock in a variety of colors instead of a single, solid color.

Colors can be mixed as they are applied. A little buff can be used to lighten an area. Black can be used to shade areas. A light spray of water from a garden sprayer will help activate the colors and make them seep into the gulapata. This is all a matter of practice. If you do not like the results the first time, you can start over. Though the color will be permanent, it may lighten as it dries. II