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Figure Class Chapter 3

by Chris Walas



Welcome back! In this chapter we'll cover considerations for doing sitting figures; we'll learn how to make and use texture pads and molds; and wonder of wonders, we'll do an engineer and fireman! If that goes well, we may even attempt the impossible, fitting an engineer into the nearly non-existent space in the cab of a Bachmann Annie! The figures we'll be doing follow the same basic techniques as we've used before, so I won't be going into much detail on the aspects we've already covered.

Remember that the figures you make are YOUR figures for YOUR railroad. Take a look at what you've got on your layout and see where a figure might be used to add interest, humor, or merely to draw attention to some of your marvelous model work. We humans are drawn instinctively to one another, even if one of us happens to be 3" tall. Use your figures as pointers on your layout to get visitors to look at what you want them to look at. If three figures are standing all looking at something, people will automatically look to see what they're looking at. Just like real life.

Having said that, the figures we will be doing this chapter are for the most part "life-givers". They add life to the railroad simply by them being there. An empty locomotive is a cold locomotive. When an

engineer leans out the window, suddenly that engine is alive and ready to move. Look at your trains and buildings and see where you most need to add life. It doesn't take much. A pair of figures here, a lone hobo there and soon the layout comes to life. A house is just a building, but when a family moves in, it becomes a home.

The Sitting Figure



Every garden railroad needs sitting people, and I don't mean the operators! The sight of empty coaches, empty benches, and empty cabs looks...empty. People riding cars, waiting at stations, eating in restaurants, engineers, well... all kinds of sitting figures really, help to fill in the little world of a garden railroad. That's the reason so many manufacturers make sitting figures. And even with the variety they make, it's not nearly enough for most people. The figures I'll be doing in this chapter are for illustration; I don't expect you to try to do copies. This chapter is about considerations for fitting figures where you need them. The first figures we did were standing figures. The only fitting concerns were the contact points of their two feet. A basic fitting figure has at least three contact points; two feet and a rear end. In a seat with a back, add a fourth contact point for the back. If that same seat has armrests and your figure is taking advantage of them, add two more contact points. Add another if your figure is asleep and his head is resting on the top of the seat. That's seven points of contact your figure has with the seat it's sitting in.

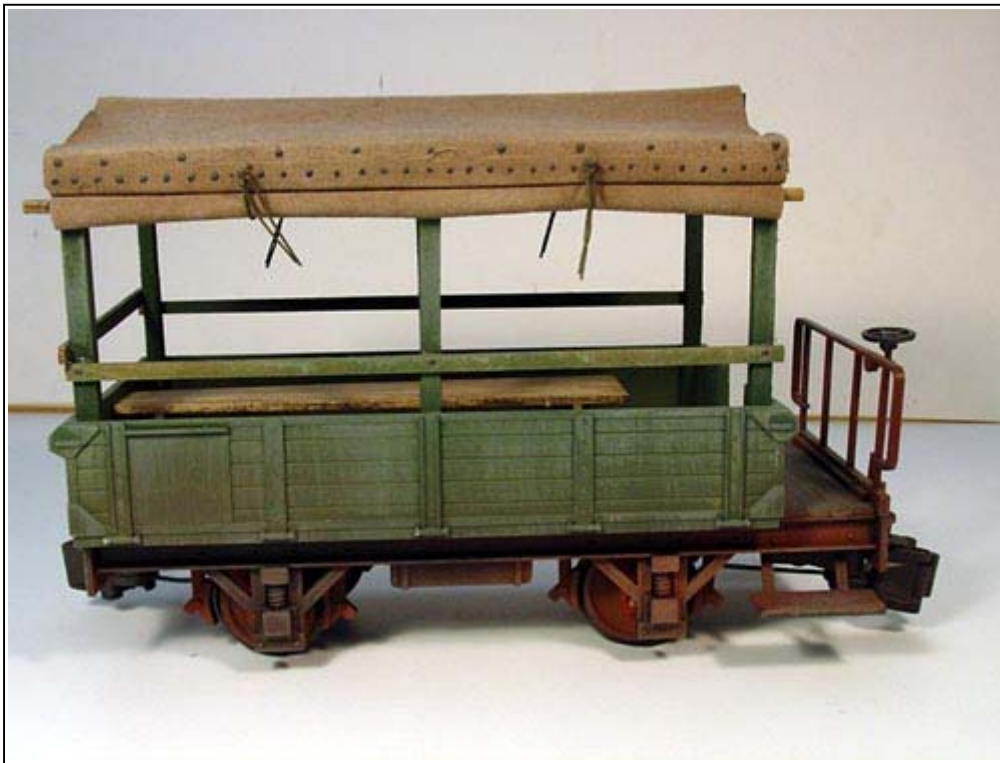
What happens if these contacts points don't make contact (or at least suggest that they do)? The figure looks like it's levitating, magically floating out of the chair! Plainly, it's not as convincing as a figure

that looks comfortably settled into the seat. That's the real trick of doing seated figures that look good; making them appear to fit the seat they are in. How do we do this? By taking advantage of the form of the seat wherever we can. And by varying the sitting pose to fit the mood of the setting. Figures for excursion cars should be having lively conversations, gazing at the sights, and in general look like they're having a good experience. Figures for a commuter train should be nodding off, reading the paper or downing their first coffee or martini of the day. Every setting, every era, has it's own opportunities to make figures unique. Think about who the passengers are on your railroad, why they're there, where they're going.

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The figures I'm doing for this section are for my Rogue County excursion train. Sightseers. I've filled two of the four cars I have and now I'll do figures for a third. As we haven't covered women and children yet, this will be the "guys" car. It looks like this.



One of the most important considerations we have when making sitting figures is knowing where they will be sitting. It does us no good to put all the effort into making sitting figures if they're not going to fit the seat! Making our own seated figures gives us the opportunity to fit the figure to the seat and make it look like it belongs there. So the seat is our first concern.

The seat in this car is simple enough, just a bench. So the main contact points on these figures will be the feet and rear ends. We'll add other contact points on some for variety. As you can see, what I've done is to form some aluminum foil to the same level as the bench, in essence I've made a single box seat the same height as the bench. I've done this because sitting figures need to be checked every step of the way. This bench is wood and polyclay tends



to stick to wood. Also, I can use the foil block to bake the figures, if needed. Plastic seats are fine for fitting and checking your figures as you go along, but remember that any unbaked clay left on the plastic will eat into the plastic eventually, so be sure to clean the plastic after each figure is done.



You must be getting pretty good doing foil armatures by this point, so do another one! This first figure for the car will be seated on the open end of the bench away from the wall. Here I've bent the armature to fit the basic bench height.

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Next I set the armature on the foil box just to check it. I check seated figures a lot.



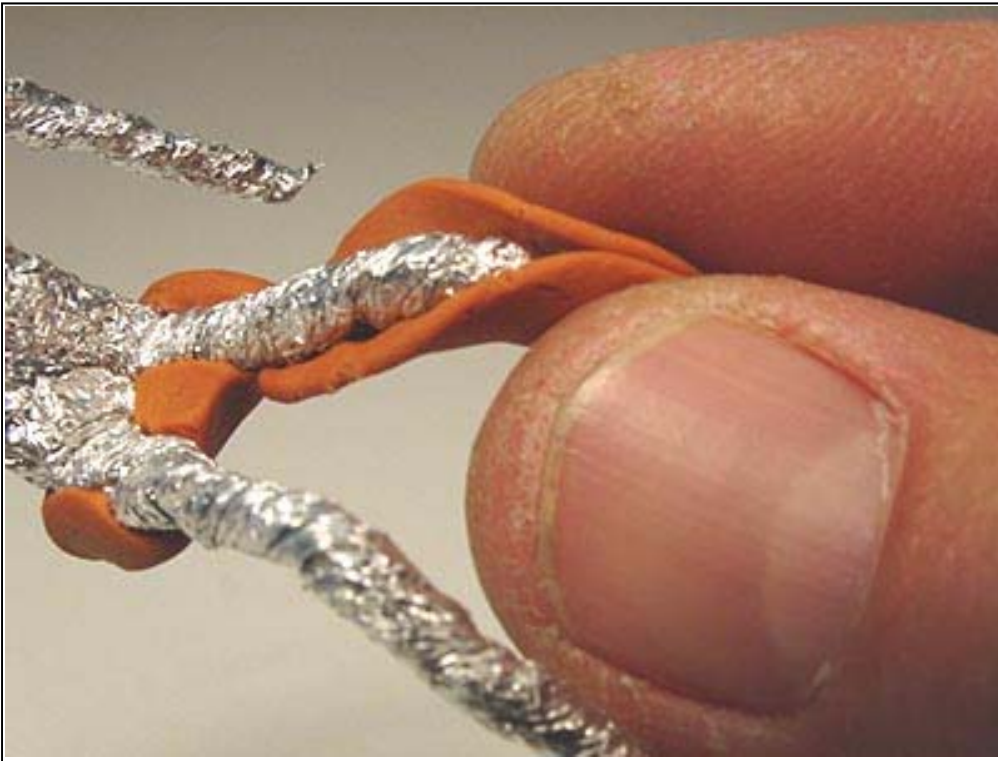
Now add the first layer of polyclay as we've been doing all along. I put a blob of clay for the rear end so that there's enough mass there to form a solid, stable base for the figure. Then I form a blob of clay into a long "pancake" shape to apply to the leg.



I'm adding the clay in flat "pancakes" instead of just blobs so that I can have a better idea of how even the clay is on the areas that will become contact points.

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It's simple enough to just wrap the pancake forward to cover the rest of the leg.



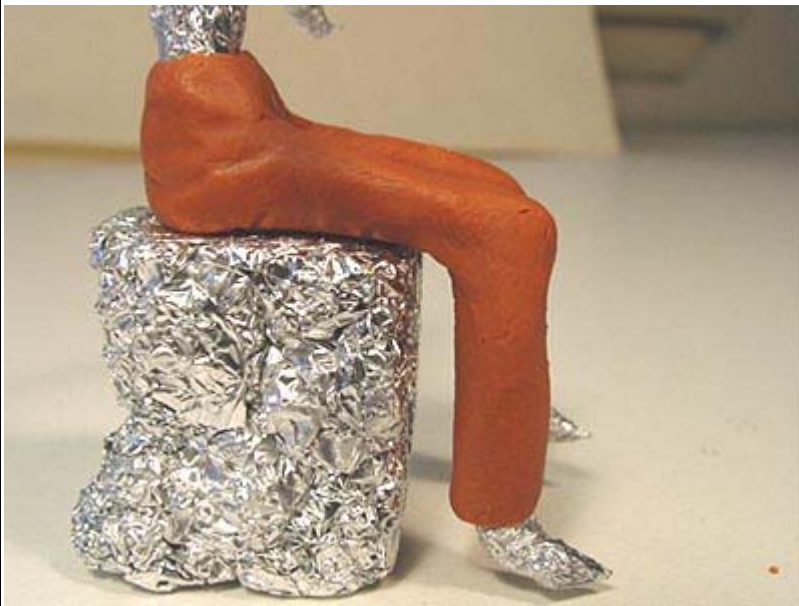
The same for the other leg. The important thing here is to try and keep the thickness of the clay even over the legs.

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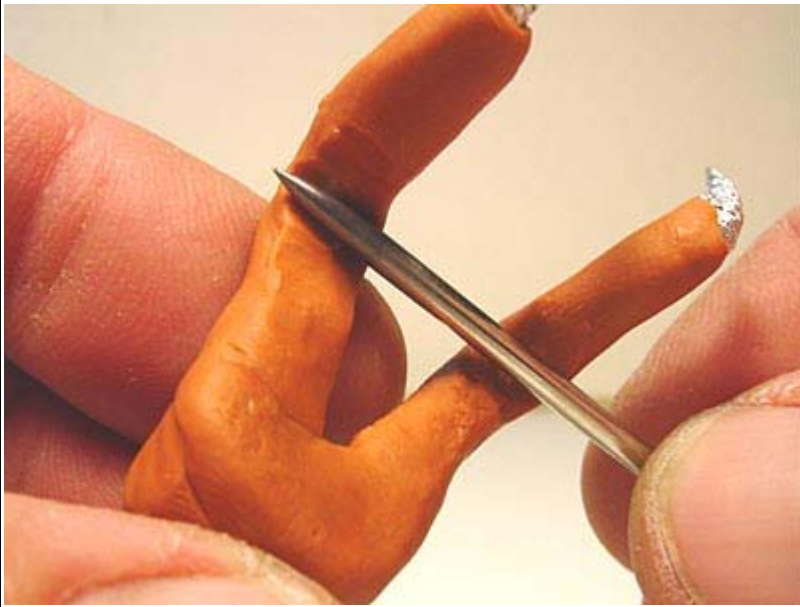


Smooth it all out and make sure the clay covers the armature from the ankles to the waist.

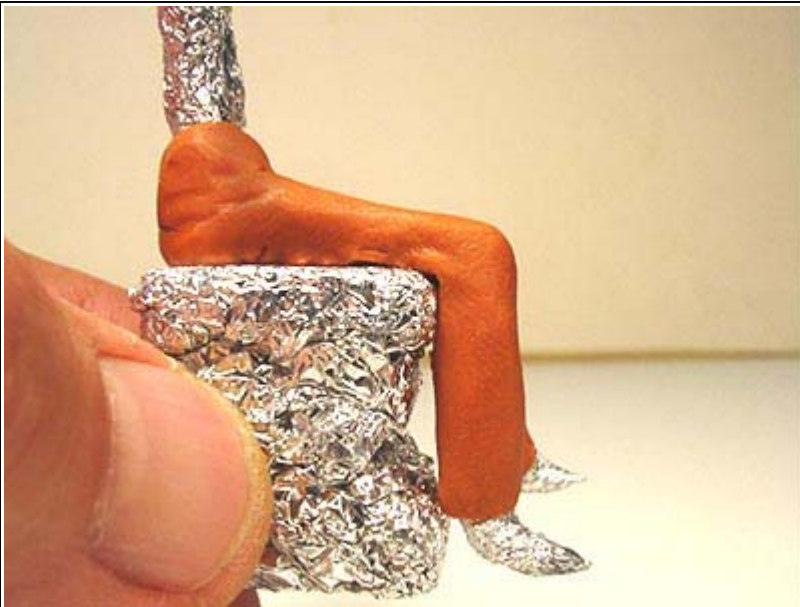


Now, sit the armature on the foil box. How does it look? This is a very important step because it establishes the basic relationship between the figure and the seat. It'll be hard to fix it if this isn't done right here, or worse, if we change this relationship along the way. This one looks OK, but just OK. We can do a little better. The backs of the knees are too rounded and the thighs are a little rounded. It looks fine here, but if we tried to move the figure back on the seat, the feet would be lifted up by the thickness of the knees. You'll also notice that the "feet" aren't touching the ground...yet. They're close enough for this stage. We're really concerned about the rear end here. (stop snickering.)

Using my metal toothpick, I press in the backs of the knees. I'm doing both at once so that they measure out evenly, that is, so that the backs of the knees are the same distance from the back of the figure. I roll the tool along the bottom of the thighs to even them out.



It's important to keep the area of the thighs that may sit on the seat nice and flat.



There, that's a bit better. The figure can sit fully back and the legs are nice and flat on the bottom of the thighs, making them look like they're resting on the surface of the seat. But I wasn't paying attention when I made the car itself and I wound up making this bench a little too tall. So...

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even with the change in the pose, this one will still sit back on the bench, so I'll have that option.



With the "base" of the figure done, I'll start to work my way up the figure. This is helpful when doing sitting figures to make sure that the correct points of connection are in place before doing the main body of the figure. Here I've turned the torso at the waist for a more natural pose as well as positioned the right arm. The left arm will go on the left knee so I can't position it until that knee is done; so for now I'm leaving it alone and bending it out of the way.

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I'll reposition the armature to make the pose more interesting and functional. By bringing the figure out away from the seat, I can take advantage of the entire length of the leg. When a figure is sitting back into a seat, the upper legs have no downward mobility. By sitting the figure forward, I can bend the leg more, set them at different heights and hide the fact that the darn seat should be lower! It's a more natural pose, particularly on an excursion where people would be expected to be looking and turning this way and that.



Once the pose is set and defines the relationship between the rear end and both feet, it's time to bake! These figures are being done in two separate locations because I'm working on them as I bounce back and forth between two cities. In Lovely Burbank I use a toaster oven to bake figures. Here's this one going in right next to that IMPORTANT THING....the oven thermometer!

Once it's out of the oven and cool, check the fit of the figure so far. I've found that

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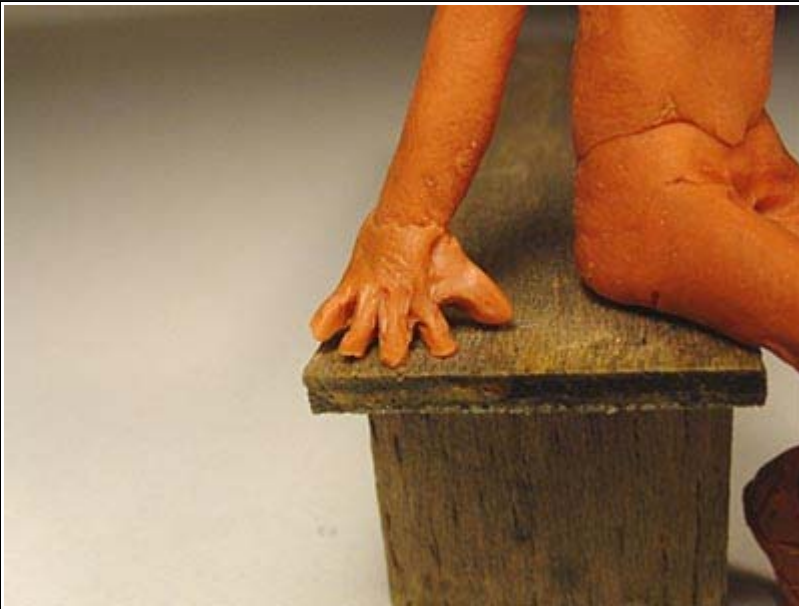
Now I've covered the torso and right arm with a first layer. This will define all four points of connection for this figure; the two feet, the rear end and the right arm.



After this stage is baked, check the fit again! These figures can have a tendency to distort slightly during baking, so it's important to check continually.



Now I'll do the feet and hand that connect, or actually touch the floor or bench. Each one starts with a blob of clay. You'll notice that once the basic connection points are baked and hard, I use the real wood bench as much as possible to guarantee a good fit.



You can do the hands any way that works for you. Here I've cut the individual fingers so that I can spread them out. This guy will be on the more visible end of the bench, so I'll put a little more effort into him!

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I've just done some quick line work on the feet to suggest shoes. Nothing fancy. Bake this stage, because the next step takes more handling of the figure.



Now I start building up the finish layer of the legs. Pay attention here. The clay goes on top of the thigh and around the sides. NOT on the bottom. If you add clay to the bottom of the thighs or posterior, you change the entire relationship of the figure to the seat!



Here's what the upper leg looks like from the top....



And here's what it looks like from underneath. The surface of the leg that comes in contact with the bench is left untouched. Got that?

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Now do the other upper leg and both lower legs, making sure to keep any connecting area clear.



Now add whatever folds, creases, pockets, etc, that you want. Brush out with alcohol and bake!



Here's how our seated figure looks at his point. It's a nice, stable, fitted start. All the fitting concerns are dealt with. The rest of the figure doesn't touch anything else (except the left arm) so the rest of this figure is a repeat of what we've been doing with our standing figures.

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The shoulders, head and left arm get the first layer and the left hand is done. I've turned his head so that he'll be looking straight out the back of the car, giving his head an almost ninety degree turn from the waist.



In this step, I did the finish layer for the upper torso, except the head itself. I brushed this out and baked.



Taking a look at him after he's baked and sitting in place, he looks natural and relaxed in position.

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I've done his head and hat in one step (I'm rushed for time these days!). He's become a prospector who's taking a break from the mine to clear his lungs and see the countryside. Sculpturally, he's done. But one figure does not a carload make...



I've decided to put six figures total in this car, so this is a good opportunity to do five figures at the same time! First, I position the foil armatures roughly in place to get an idea of where they can fit. These five figures will be done more like the standing figures. I'll put a first layer on all the armatures, then fit them to the bench; sort of the opposite of the first sitting figure. Both methods work as long as you stay aware of the contact points.

Now that we've learned



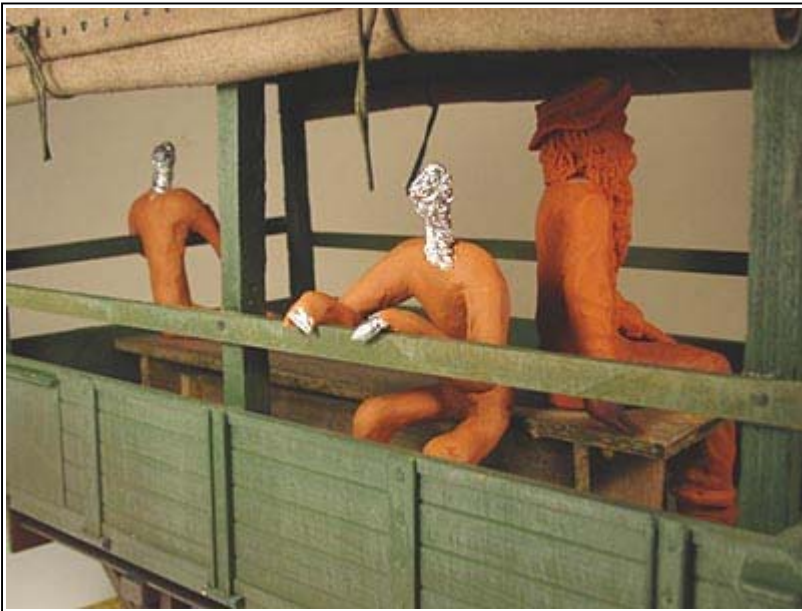
the basic considerations for sitting figures, we can be more adventurous! I've put the first layer of clay on all five armatures. Here it's easy to see how quickly those thin armatures will fill out the bench when they become figures.

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I've already done the figure for one end of the bench and to make sure of the space I'll have to do the others, I'll work on the figure at the opposite end next. This way I know how much area there is in between the end figures. This guy will be hanging on the rail, looking at people in the next car. (Note to Chris; put a pretty girl in the next car). This guy now has six points of contact; two feet, two hands, posterior and underarm. A little trickier than the first guy, but maybe more interesting because of it.



How about a guy leaning forward holding on to the rail? He must see something interesting. Note that I've had to move him to the edge of his seat to get his hands over the rail. Let's call him Looker.



On every sightseeing tour, there's always someone who couldn't care less about the scenery. We'll call this guy Boozer, as he's going to be taking a swig from a bottle.

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I check on Boozer to make sure that his guzzling will be low enough to be seen when he's in place. Oh, yeah, it shows! Boozer is a floater in that he can be moved forward or back on the bench to adjust for any other figures placement.



Ah, here's Mr. Otter, the quiet merchant. Hmm, he's not as rotund as I'd like him....



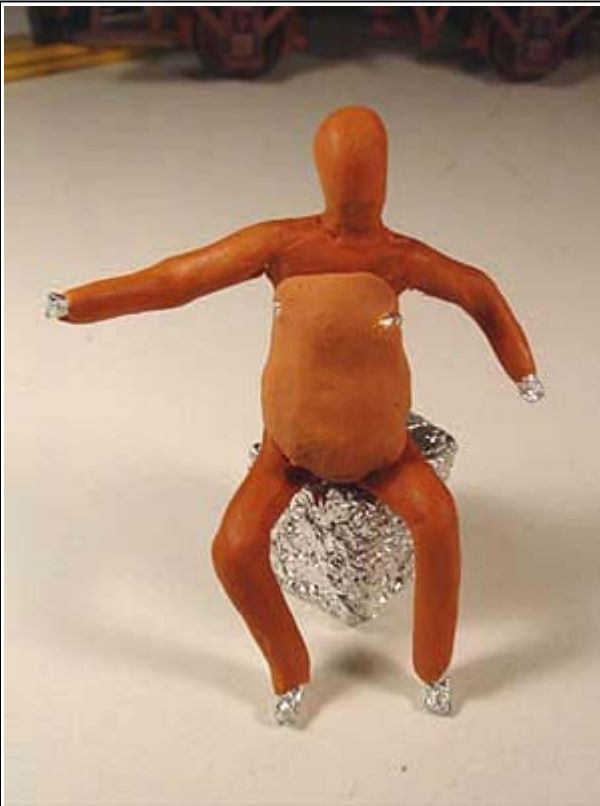
I add a blob of clay and then take a bunch of armature cut-offs and stick them in place to help fill him out. Using the foil is good for two reasons; (1) it uses less polyclay and (2) it helps to prevent cracking in the baking stage by keeping the clay from getting too thick in one layer. Speaking of layers, I think Mr. Otter needs another...

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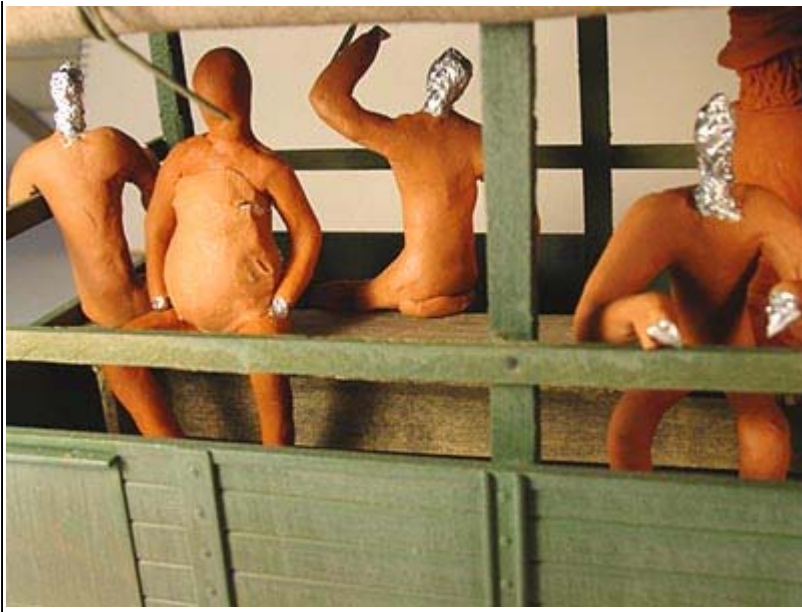
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That's getting it. I'm not baking out each layer of the foil/clay because the foil will take up the slack in any expansion/contraction during baking. On larger sculptures, though, I would bake each layer.



A final layer of clay and he looks like he's about the right mass. Time to position him!



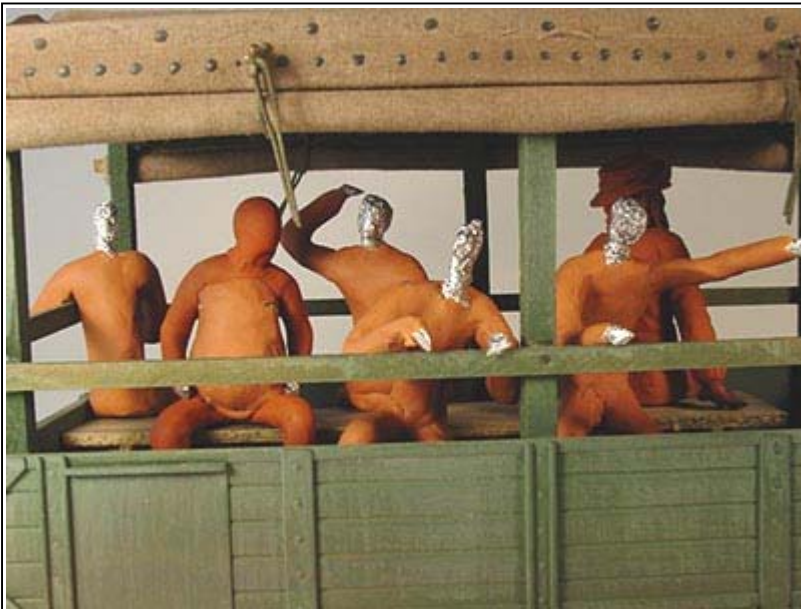
Mr. Otter is the meekest of the bunch and I'm going to point that out by giving him a reserved pose while the rest of the guys in the car will be more relaxed or active

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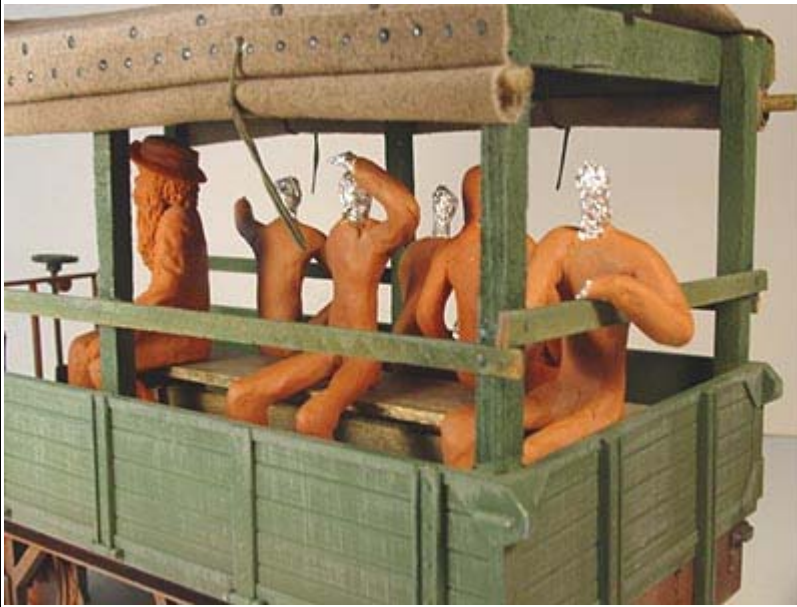


Last man on the car will be Pointer. He sees something fantastic and has to point it out to others. He's positioned literally on the edge of his seat with excitement.



Here then are the six figures as they will be seated in the finished car. (Looker is tipped over a little). What I want to work toward is an interaction between the three guys on this side of the car. Pointer points excitedly while Looker scans to see what he's pointing at. And quiet Mr. Otter will be sneaking a look to see what it's all about.

Here's the other side of the car. Boozer looks like he's being snubbed by the other guys. There's probably enough



room on this side for another figure, but I'll wait until I get these guys done to see for sure.



Here's what the bunch looks like from overhead. You can see that there's still room in between them all, more on one side than the other. But I'm happy with the basic layout of the figures, so they get baked!

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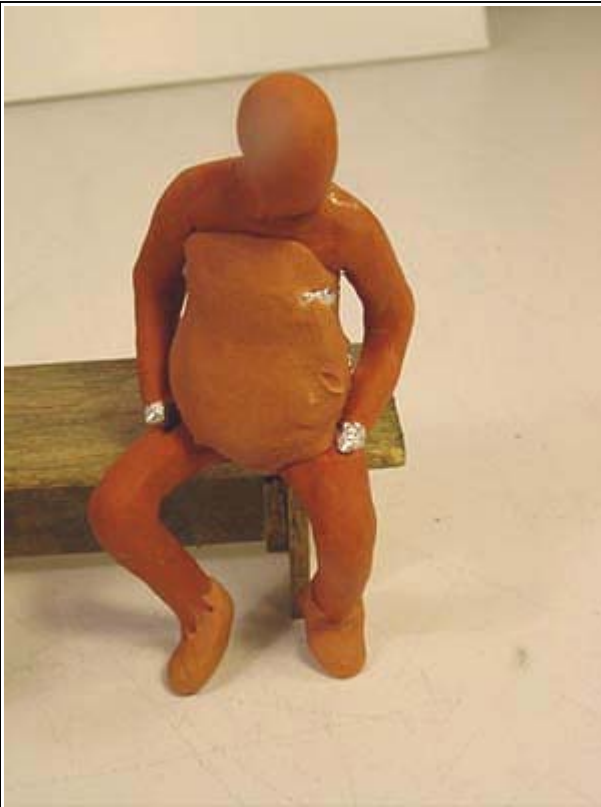
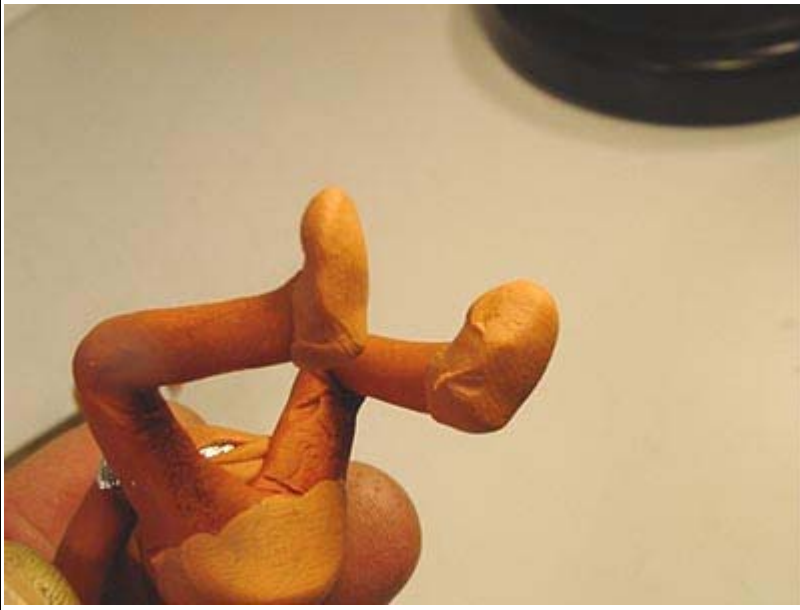


Now that the basic poses are locked, it's time to lock the relationship to the bench. This is easily done by adding a lump of clay for the rear end. Don't try to form a flat "sitting" bottom. This is Mr. Otter, by the way.



Now wet the rear end with water and gently press the figure down into position. This will give you the matching surface the figure needs to fit the seat. It should look like this.

Now add feet.



Check the fit of the figure. Does it sit solidly without rocking or tipping one way or another? The figure should sit just the way you want it at this stage. Bake.

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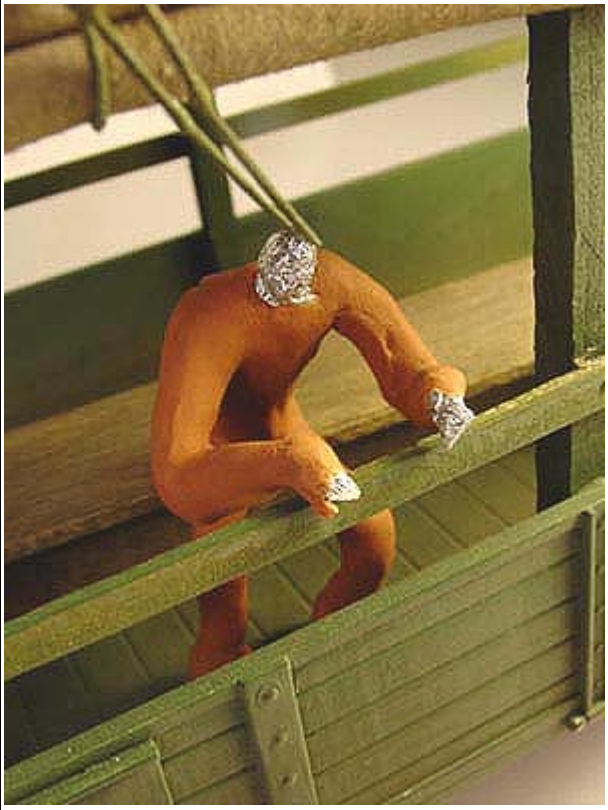
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Here's the same step with Boozer. Three solid points of contact.



Here's the guy with his arm over the railing. Same deal. Take your time and make sure this step is right. It makes the rest a lot easier.



Here's looker. Like the previous figure, it's important to make sure that the hands are where they need to be when you do the "bottom match" as this step locks in the hand spacing as well.

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Here's Looker from the side. You can see that his feet, his rear end, and his hands all need to be in the right positions in this step.



When you feel comfortable with all the figures, bake. I'm baking the Miner as well because I've added a little hair to the side of his face.



After baking, check the positions. If anything shifts or doesn't fit after baking, fix it immediately by breaking and patching the section to fit. It's easier to fix now than later.



Now I've started on the finish layer. This is usually where I make a mistake and add a little clay in the wrong spot when I'm not paying attention. Here I added clay and then checked the position to find that the figure was sitting closer to the rail than I thought, so I needed to form the pants up against the back of the car.

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Here are the boys, brushed out and ready to bake. The sculpting is done from the waist down now.



Now I do the shirt step, or upper torso.

Once that's done, it's time to move on to the next step. Because Mr. Otter and Boozer don't have any more connecting points, they can get their hands and heads done now.



But as you can see here, the next step for Pointer, Looker and the guy on the end is to get their hands that contact the rail done, finishing the contact points for these figures.

Mr. Otter has gotten ahead of the pack. He's finished. Boozer still needs one more step to do; the hand and bottle!

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Now I could have done the bottle separately first and then positioned the hand around it, but it's quicker and stronger to sculpt them both together in the same step.



I'm doing Pointer's head and hat in the same step for speed. The pancake brim of the hat has been positioned and the cap of the hat will be added on top of it.

So here they all are in their finished



sculptural form. Six of Rogue County's finest.



Now to check final positions and make sure everyone fits in their place one last time before painting. Plenty of space on this side of the car.

And things look good here on this side as well. You can see where these three characters' gazes flow in a single direction. What do they see?



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PAINTING



OK, let's get these guys finished and on board for the trip! As we've been over this before, I'll skim through and just mention a few things. Here's my basic figure painting set-up.

- A Painting Surface. Here, it's a plastic tray.
- Paints. A selection of craft acrylics are my weapons of choice.
- A Paint tray. To set out several of the most used colors.
- Brushes. A selection of medium to fine brushes. These clear handled ones are from a cheap set, but still good for this use.
- Container of water. For washing brushes and thinning paints
- Damp cloth. For wiping up all the paint I spill on myself!



Here's five of the colors I'll be using; three shades of brown, one gray/green and black. I'll be using other colors, but I'll try to use these on several of the figures.

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I first painted the pants on all six figures. Two with one of the browns, two with a denim color, one with the gray/green, and Pointer gets black pants. I try to make sure that each color goes over the adjacent color area so that there won't be any unpainted areas. Every time I try to paint just to the edge of a color area, I seem to leave a sliver of unpainted clay showing through, so I overpaint the next area now.



Just like the figures we've done before, you can paint figures in any sequence that works for you. I usually start on the pants and move to whatever area I can paint while the pants are still wet. Here, the miner gets his hat and shirt colored.



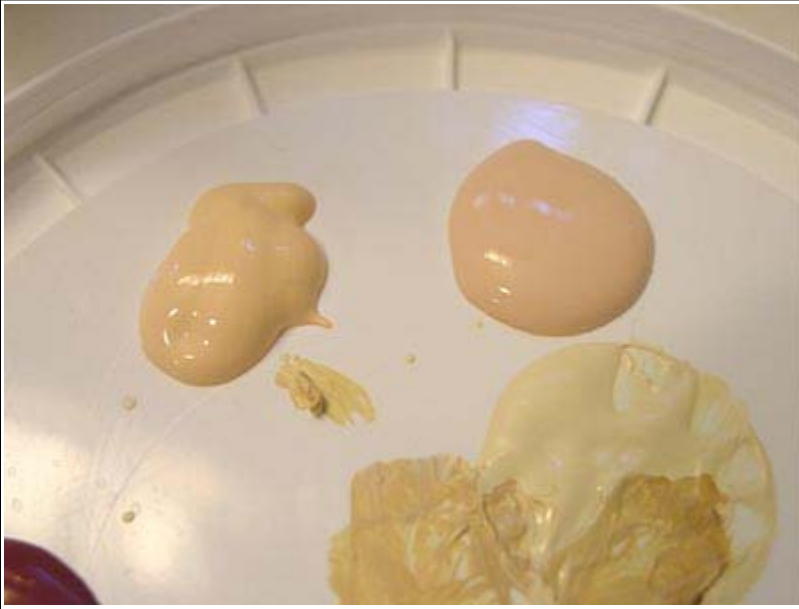
Pointer gets his hat colored. His face and hands have not been painted yet, I just used a different mix of clay there.



On to the shoes. Three black, three brown. You may be more particular about shoe color. I find that no one really pays much attention to figure's feet.

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I didn't have a good flesh base color handy, so I used a couple of odd colors; Light Apricot (which is too yellow) and Blush (which is too pink). But we don't want everyone to have the same color skin anyway, so I'll mix and match these paints on each of the figures to create some color variety.



Here are the boys with most of their basic colors on. A bit too glaring for me!

Here's Pointer, Looker and Mr.Otter with a quick dark wash. Much more dimension.



The same with rest. You can see clearly how the wash helps define the texture in the miner's beard. Good stuff.

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Here's the whole group after a light drybrush with an ivory color. Normally I don't use anything as bright as ivory, but I had it handy. The lighter the highlight, the less of it you need to use. Let's take a last look at the boys before they board the car for the final run.



Our miner came out OK. Notice the highlight and shadow colors. Neither one is too overwhelming. That's the trick with both; subtlety. I made his eyes weary by lining them with red, also good for vampires!



Here's Boozer! His green bottle hasn't gotten its polyurethane gloss coat yet, but otherwise he's done. I used the same red as the miner's eyes and thinned it even more to give Boozer's nose and ears some rosy color.



Here's the guy on the end. I wish this was a better shot. I had forgotten to paint his tie until after he was done. To keep the red from being too boldly solid, I made a thin red wash and painted with that. This cuts down on the intensity of a color and while it's still bright, at least it looks like it's not a solid block of paint.

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Here's wide-eyed Pointer. I outlined his eyes to show they were wide open. Coupled with his gaping mouth, it adds up to a look of surprise.



Here's Looker, one of my favorites of the group. He's the most cartoony of the bunch, which can be a bad thing or a good thing, depending on your railroad!



Ah, Mr. Otter. I think he's my favorite. His low-key presence has a charm all it's own. While the highlights and shadows are a bit strong on him, they still balance each other out well enough to not be distracting.

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Now to glue everyone in! I'm using WeldBond, which is a water clear acrylic adhesive. I glue the two figures at the ends of the car for the same reason I fit them first; all the other figures have to fit between them.



Getting the rest of them in place is easy. After checking the positions so many times along the way I think I could glue them in the dark!

Most of them get a blob of glue on the bottom and on the feet. Keep a wet rag handy in case you get glue anywhere it doesn't belong.



Once I had glued all the figures in place and while the glue was still wet, I decided to make room for one more figure, so I slid Boozer over. I'm sure I've got a figure somewhere that needs a home!

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You can see how much glue I use by the blob hanging under this guys hand! That's why I use water clear glue.

The Really Quick “Filler” Figure

Here's a way to do “rough” sitting figures. Now I wouldn't normally even show you anything this quick and dirty, except for the fact that some of you probably have a bunch of coaches you want to fill with figures. You probably also don't want to spend the rest of your life filling them, either! Here's a figure that on its own looks pretty weak, but in a coach with twenty others might look just fine...behind some dusty plastic windows. If all you're looking for is bodies to fill the cars, try a few of these.



Form a piece of foil like this. It looks like a sitting mummy. No arms or individual legs.



Now fit it to the seat. This one is going in a Bachmann coach. These seats were not made for normal human proportions. So we have to use "selective compression" and make some areas smaller than they really should be. I've cut off some of the foot section already and I still have to cram the armature down to sit it in the seat!



Once you've manhandled the armature into submission, give it a solid coat of clay. Not a thin First layer kind of thing, just a solid coat of clay. This figure is only getting one layer! Leave the head free so you have something to hold onto.

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Next, put on a couple of snakes of clay for the arms. The arms don't need any armature if they are attached and supported over their length by the body, or if they are well attached to another area, as in straightening a tie or the like. Notice what a sloppy job I'm doing!



Check the fit. Remember to wet the seat to prevent the clay from sticking. Push the figure down well so that it really conforms to the seat.



Draw a line down the center front. On the upper torso this will be the shirt or coat overlap, while on the lower section of the figure, make the line wider and deeper to make the separation of the legs. I've made a rough form of the feet as well.

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Now do the detail work, such as it is. Ignore the feet unless they really will show. Use your toothpick tool and define the hands using the mitt approach. Add some folds in the clothing here and there. Not too deep.



Check the figure again. Hmm, proportions are all off, but hey, so are the proportions of the seat!



A few more folds and buttons, brush it out and Bake!

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The head is done in one pass. It's really more just a suggestion of a head as the details are not sculpted in at all, just a very general form. Turn the head to look out the window if you want. The hair is a single blob of clay wrapped over the crown of the head...



And pushed around until it suggests the basic shape of hair. I know this isn't a great photo, but don't worry, you're not missing any detail, there isn't any!



Here's the "face" head on. Not a lot there. Guess what? BAKE! I'm serious.



After baking, paint hands and face. The flesh color looks yellow here for some reason. It's not really that yellow.

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Paint hair and all clothing brown. Put in dots or dashes for eyes.



Add a dark wash.



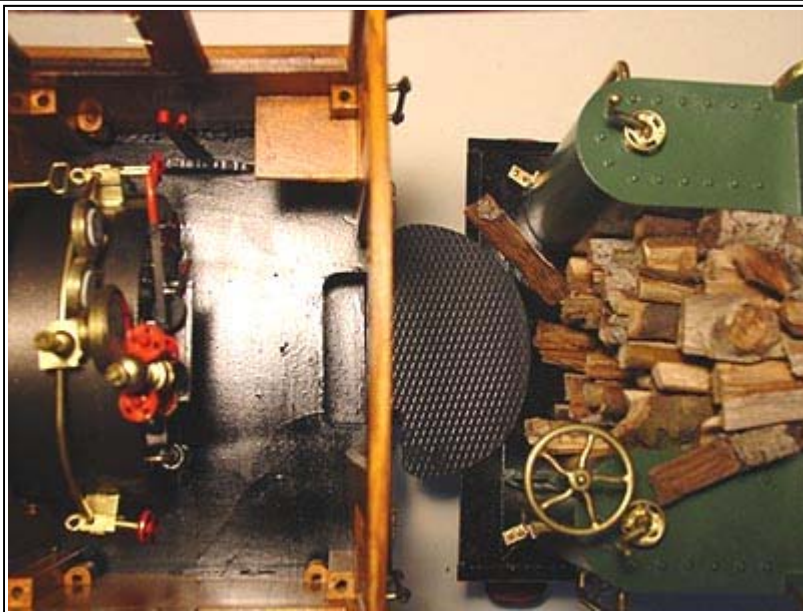
Brush on some quick highlights. Glue in seat. That's it. It's quick, ugly but quick. Using this method, I think I could fill a Bachmann coach (22 seats) in the same amount of time I took to do the six figures in the first section, possibly less time I. I also suspect doing a lot of these figures all at once would be easier than just doing one at a time. Of course there's any number of versions of this figure as you add detail . But this is about the absolute minimum I would try and get away with. I'm almost sorry I showed you this!

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ENGINEER AND FIREMAN

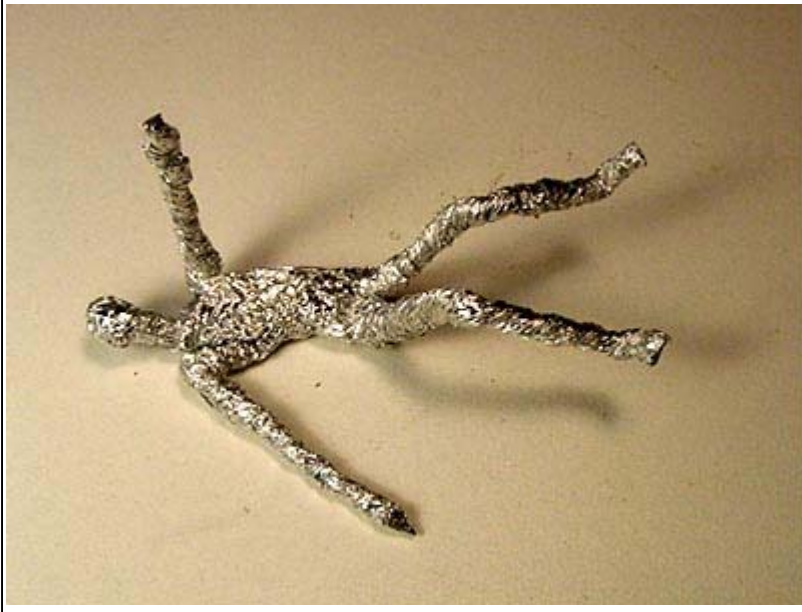
Finally! Here's where we get to put it all together! Our engineer will be a fitted, sitting figure with elbow over the window sill and left hand on the throttle. Our fireman will be a standing figure in mid-action pose of grabbing a piece of wood for the fire. As with the sitting figures, we need to look at the place these figures will wind up.



Here's an eagle's eye view of the cab and front of the tender for my Kalamazoo 4-4-0 bash, the Silk Purse. Fortunately, there's a good amount of room in here! I've decided to fit the fireman on the hinged footplate rather than in the cab, so clearances for him will be a consideration. Let's meet the cab crew.



As fine a pair of aluminum foil armatures as ever I've met.



Working with figures in confined spaces can be a challenge. To get our engineer started , I guesstimate a rough pose. He'll have to be tweaked over to his right side quite a bit to be hanging out of the cab.

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Now I sit him in the engineer's seat and adjust him to where I think he needs to be.



This looks pretty good. It's so easy when they're just foil! But what this does is tell me where my potential problem areas are. It's extremely easy to find a pose that looks great, but won't fit in and out of the cab! On this guy it's going to be that arm out of the window. He'll grow a bit as I build up the clay and by the time I lift him out of his seat to clear his elbow, his head will be hitting the window top. I'll have to cross that bridge when I get there.



On to the fireman. Standing solidly on the plate, he's turning at the waist, grabbing a piece of wood. I've held down the armature with Blue Tack, or Fun tack (whatever it's called) so that I can check the clearances when the foot plate is folded forward to hook the engine and tender together...

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Here's the up position and I've had to move him slightly toward the engineer to clear his shoulder in the doorway, but it looks like he'll work out fine.



Here's a better shot of how the figures are fitting.

The fireman seems to clear everything



now, but I'll check every time I add more clay to be sure.



I'll start with the fireman since he seems to be going well. First layer is on, including the feet as these are the only contact points on this character.

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are two lines formed here so that the figure will fit exactly into position using these locating "Locks". I bake at this point!



I'm adding some bulk to the torso so that I can go slowly! I'm double checking every step here! The feet get matched up here as well.

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I have to be careful about his leaning forward or backward, so I'm taking extra care and supporting his legs with some foil for baking.



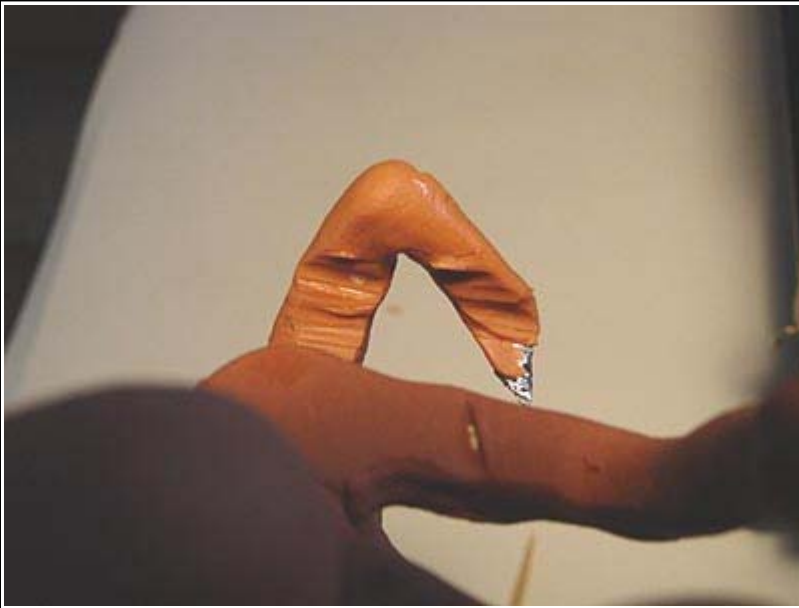
While he's baking, I'll attack the bigger challenge, the engineer. He's got six points of contact; feet, rear end, left hand, right shoulder and right wrist. And he's in an awkward space. Getting these first few steps right will be critical. He gets a first layer from the waist down, excluding the feet for now. I really press him down into the wet seat not only to get a flat matching layer, but also to get a hard line of the edge of the seat.

Like this! This is the most critical connection of this figure because all the other contacts points will be based off this first connection. It's great that there

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Just double checking the relationship between the figures here. No problems so far.



After adding clay to the engineer's right arm, he gets pressed back into position again. Here you can see the indents in the arm and wrist for the sill.

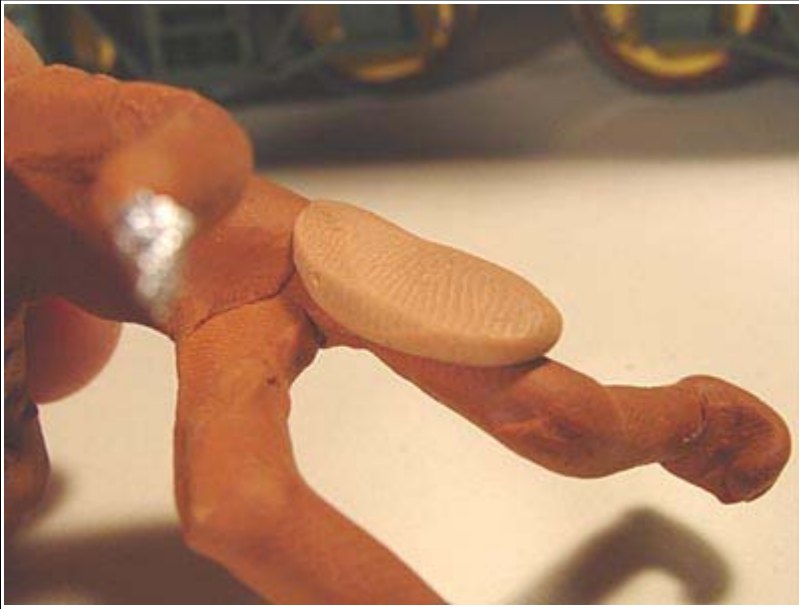
At the same time , a very strong indent is formed in the side. I better bake this before anything gets messed up !



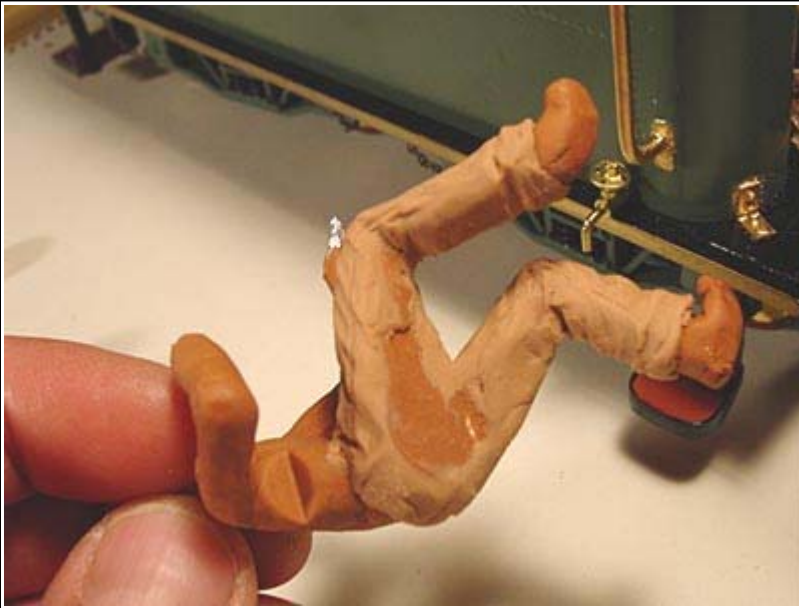
While the engineer bakes, I work on the fireman. As he has his contact points all locked down (both of them!), I can move more quickly with him. I finish off his shoes and build up his overalls and into the oven he goes.

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Back to the engineer. I'm ready to start the finish layer on him and I go ahead just like the first sitting figure, building up the legs only in the non-contact areas.



You can see here that the original contact area with the seat is left as is.

After baking, another check. It seems OK, but that left foot seems to be lifting for some reason. I'll keep my eye on it.



One thing that I find happens a lot when doing this pose (it's my favorite engineer pose), is that as the figure grows, the angle leaning out of the cab lessens. I often have to readjust the neck and head to get them further out of the window along the way. We're doing fine with this one.

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Back to the fireman! I'm roughing in his sleeves here. He's a hard worker, so his sleeves are rolled up, which is just another long blob of clay over the end of the shirt.



Here's a "Comin' atcha!" view as he reaches for a log.



Time to put the gloves on! Quite honestly, I often forget these important accessories. I start with two blobs wrapped around the end of the arms.



With my spatula tool, I begin to form the large sleeve of the glove.

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Heavy gloves tend to have heavy seams, so I make sure there's a definite line of demarcation.



Now I don't want to use an actual piece of wood to form the gloves around, because I can't bake the wood in place without taking a chance of the clay cracking. So I used the wet end of a paint brush to form the hand sections around. I'm sure I'll be able to find a piece of wood to fit after the figure is done and painted.

After removing the brush end, I can



detail the gloves with my toothpick tool.



I've changed my mind. I want him looking toward the boiler, not the tender , so I slice off his face area to realign the mass of the head. Hmm, looks like a Westworld figure!

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I've added the new head mass and pinched the clay to give the face a direction. You can still see some of the foil facing the wrong way!



I'd better get his head done before I change my mind again. I've done the head, but I'm leaving the hair/hat for another step.



Back to the engineer. I'm detailing his back and carefully making sure that I don't fill in any of the indent in his side. I've also added the basic ball for the head.



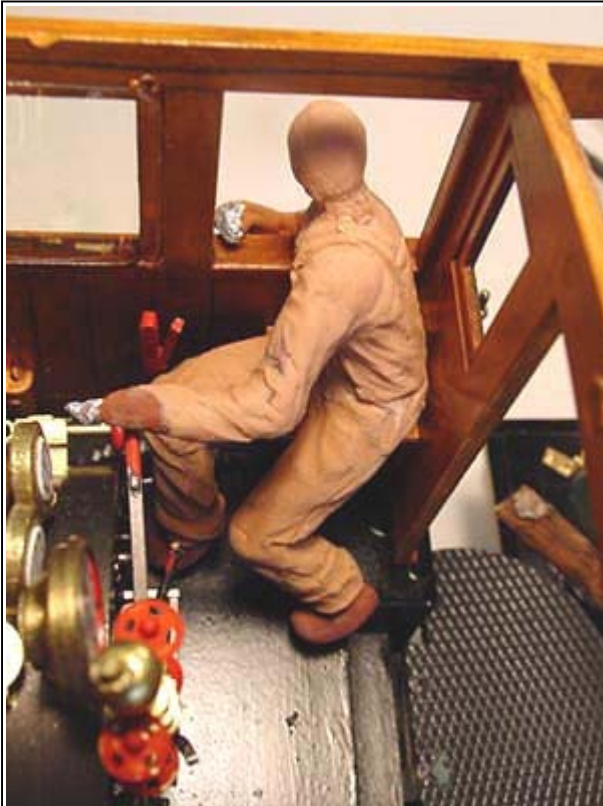
I'm doing his left arm to the wrist. I won't do his left hand yet. I'll wait until I have the more critical right arm and hand finished in case I have to make any adjustments. It's easier to change the position of a hand than it is to change an arm.

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Double checking that position again! He's still fitting OK and looks good from the outside.



The upper position looks good from inside, but that left leg has definitely lifted. I'll have to do something about that, but now is not the time.



I double check both figures to make sure all clearances are still good and also just to get an idea of what they will look like! I gave the fireman one of those funny brimless caps that were so popular in the early days of RRing.

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Now comes what is probably the trickiest part; the right arm. The foil at his wrist is a little far forward and there doesn't look like there's enough room for a gloved hand. I broke a little of the baked clay away from the wrist and angled the foil more to give more room.



As with all of the other fitted figures, the clay goes around the first layer except the points that make contact with the loco. I've roughed in the arm here, but need to check it before final detail.



It looks fine. The figure fits quite well and almost snaps into position. I'm feeling brave so I'll do the left hand in this same step.



Had to shoot through the window to get this one! I've roughed in the hand, but left it outstretched rather than try to pre-bend it to the throttle.

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With a moistened finger, I gently bend the fingers around the throttle before a final brush out and baking.



After baking, and while the figure is still quite warm, I set it in place to triple check the fit. It's at this point I bend the warm and pliable left leg down to adjust for its lifting. Now all of the contact points are locked.

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Finally, our engineer gets a personality. He takes his job seriously and looks accordingly somber.



Here he is. He fits great. He's got to be taken in and out very carefully, though. He must be raised enough to free the elbow and then leaned out of the window until the elbow can be pulled in, which makes room for the head to follow.



Some basic color starts to bring them to life...



After a dark wash and drybrush highlight...

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And with eyes, buttons, suspender clips, etc. all finished!



The Silk Purse now has an able bodied fireman hard at work!



While her engineer concerns himself with the effective execution of his responsibilities!

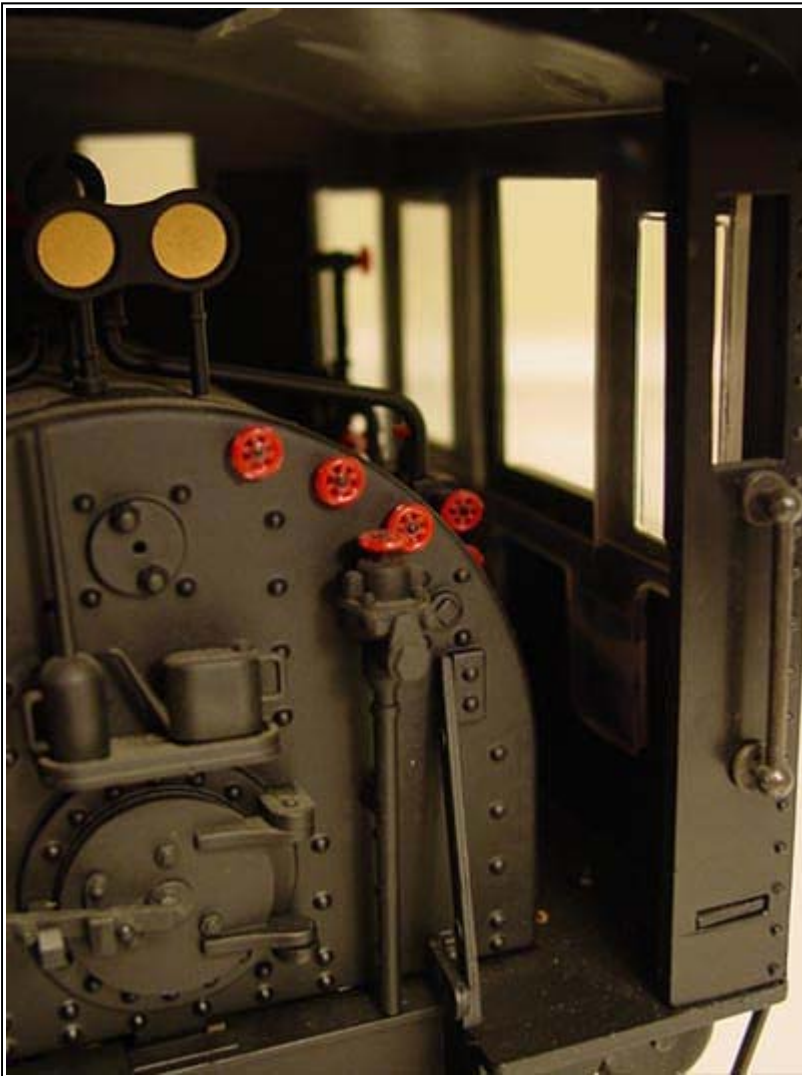
Done!

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PUSHING THE ENVELOPE!

Fortified by our success with the Silk Purse crew, let's throw caution to the wind, pull out our Bachmann Annie ten-wheeler, and challenge fate! Here's the area we have to put an engineer in the cab of an Annie:



It seems so peaceful, so innocent...NOT! Make no mistake, this is a tough job making a figure to fit in this tight a space. But with a bit of luck, we'll get the job done. You'll notice that the reversing bar is still on the wrong side of the cab. Quite honestly, I'm not sure I'd even attempt a full figure if it the reversing bar were in the way!

Let's make an armature. It wouldn't hurt to make one a little on the thin side! I've already had to repair the right forearm



from twisting the foil a little too tight! I've bent it in what I hope is a pose that will fit. I'm ignoring the left arm because quite frankly, I have no idea where it will wind up!



Sitting the armature in place, it's easy to see that there simply isn't much room here. I have no idea how a real human being could have done it without being burned! The armature does seem to sit well enough, though, and with a slight twist of the torso, it's not too difficult to get its right shoulder and head out of the window so the engineer can be looking ahead.

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But looking at it here from the outside, I can see that it's going to be tougher than I had hoped. The arm and head fill the height of the window, which will make placing and removing the figure problematic. If there were more room in the cab this wouldn't be such a worry as there would be room to move the figure around a little more, but here in this tight space, the figure won't simply slide in and out of place easily.



I cover the armature with a first layer of polyclay over the torso and legs only. There are simply too many questions to even think about the arms at this point.



While the clay is still pliable, it's not a problem testing the fit at this point. As layers are built up, the figure will get stiffer and more difficult to work into place. It fits the position well, so I bake at this point.



The next step is the feet. Only the feet and nothing more. In cramped quarters, it's best to take it nice and slow.

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I've begun to build up the mass on the torso and legs. I've also held the figure up against the outside of the cab and drawn a line where I'd like the figure to contact the back of the window. I'm doing this to help me make sure I've got a good sense of the space. This line will tell me if I'm way off base when I test fit.



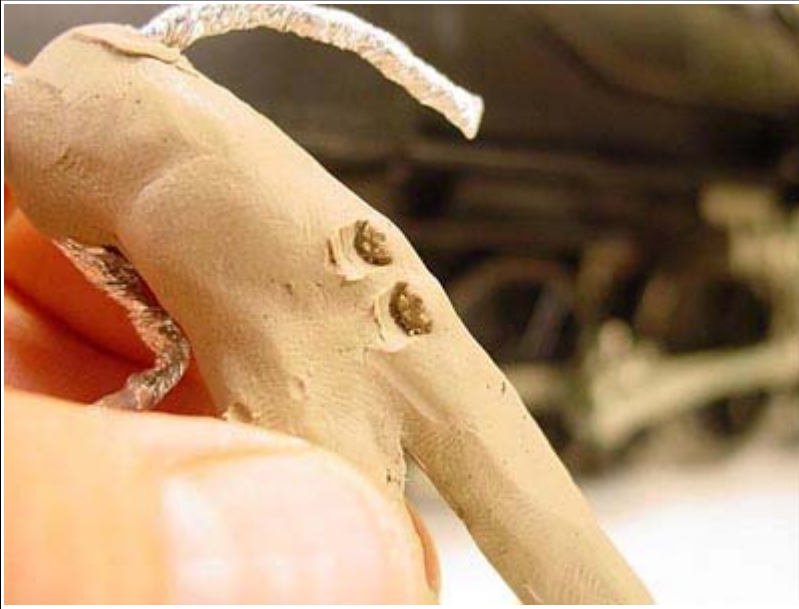
The figure lines up well, so I press the figure against the back of the window to create an indent in the back of the figure that will be the "key" to lock the position every time I test fit the figure.



At the same time, I push the figure against the boiler. This will let me know if there are any problems in this area.

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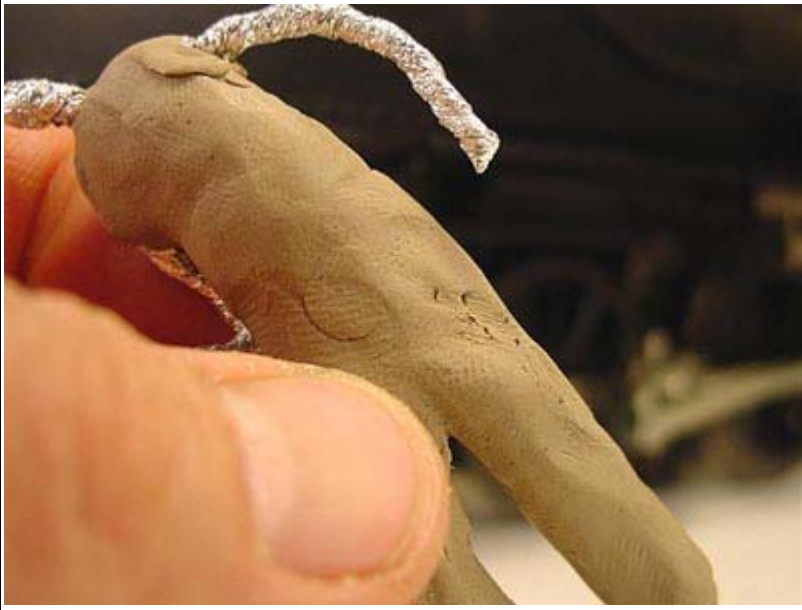


Problem. Two valve wheels want the same space as my engineer's hip. I'll have to do something about that after I check the back of the figure.



On closer inspection, it's evident that the back didn't line up quite as well as I thought. These two lines are on either side of my original. I can choose either one of these lines as the key now.

Before I do anything to the back, I remove the area of clay that was coming in contact with the valve wheels so that it doesn't affect my final fitting of the key in the back.



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I've chosen the left line, which should help get a little more of the figure out of the window. I erase the other line before testing the fit...yes, again. It's really IMPORTANT!



Now there's plenty of space around the valve wheels and the figure keys into the indent just right. Actually, he doesn't. He's not leaning out of the cab enough for some reason.



I'm a little less than thrilled now, so I scrape off the line in the back! It's so easy to get this figure out of alignment that it's going to be easier to almost start from scratch! But the general pose and mass of the body are already defined, and the arms are totally re-positionable, so I'll define a little more of the figure before I re-key it.

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First, I'll block in the final layer of the legs and torso.



Actually, I'm not sure why I'm putting any detail on the lower section. The chances of anyone being able to ever see it is minimal! But in the name of completeness, I'll do it!



Big mistake! After baking, the test fit shows that the mass of the legs has gotten too large and is turning the figure into the cab instead of out!



I'm tempted to just finish him this way, but it's already getting to be an awkward pose and it will only get worse as I add more clay....

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So I mark the key line again (this time with pencil on the baked clay).



Now I take my dremel with a sanding drum on it and carefully take down the areas where the clay has gotten too thick.



Even though it doesn't seem to need it, I take down the side of the leg closest to the boiler as a precaution.

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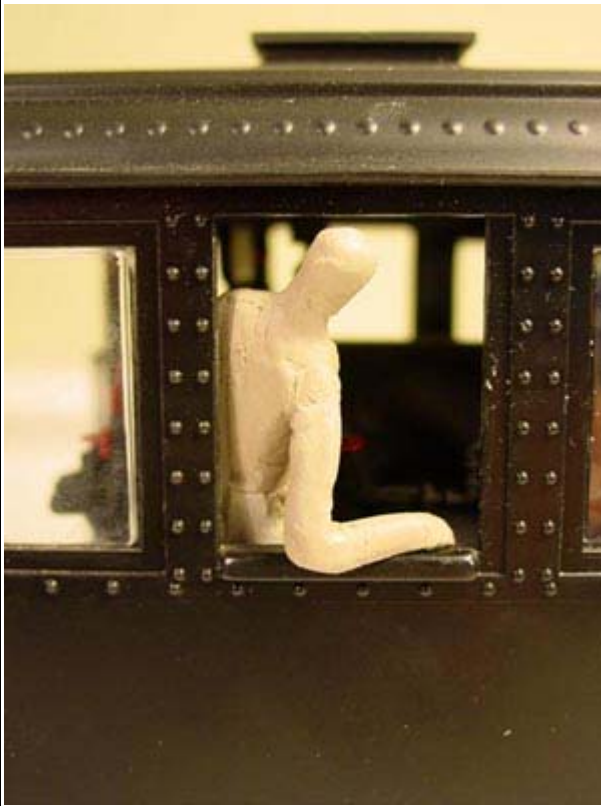
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While I've got the sander out, I take down the bottoms of the feet a hair or two to shorten the figure slightly. This will give a tad more clearance for getting the head out of the window.



I've test fit the figure (again) and I'm happy with the fit. I've decided to use the arm to lock down the position of the figure in the cab, only because I'm having problems with the back. I add the first layer of clay...



And test fit again to get the final position of the arm.

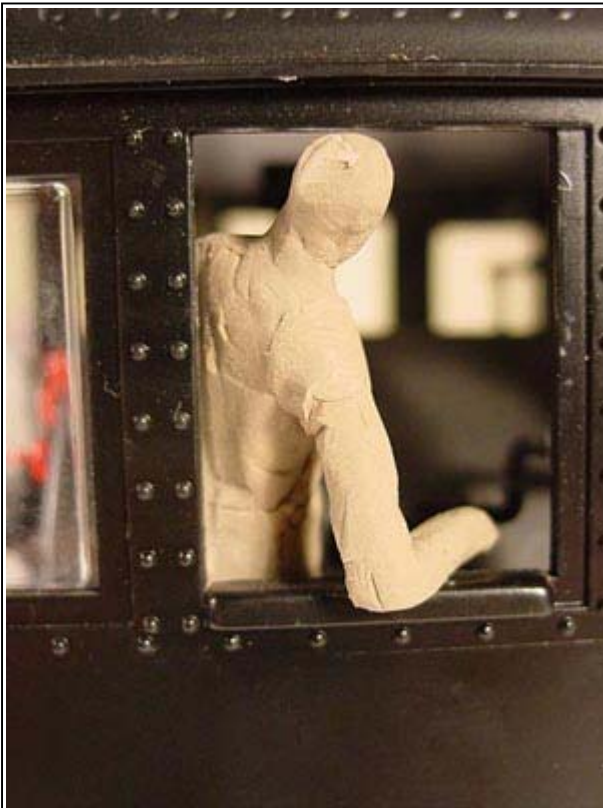


I CAREFULLY remove the figure, making sure that I don't knock the arm out of position. If I did, it would go back into place to reposition.

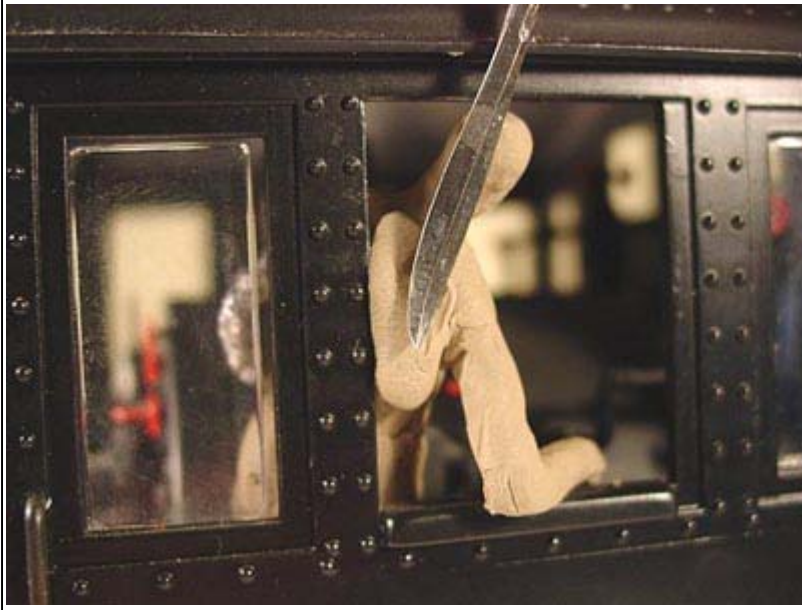
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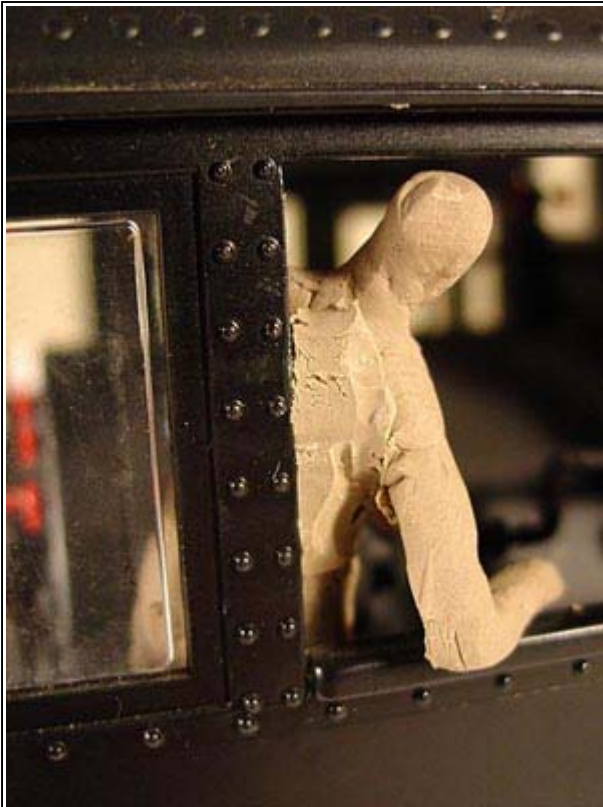
Well, the best laid plans.... Even with careful checking things can, and do, go wrong. The arm was out of position after baking. I don't know why, it may have drooped during baking. I break the clay at the shoulder and reposition the arm.



I then add clay to the break, making sure to work it well into the split and then bake..



The figure seems to be seating itself pretty well now, so I add clay at the troublesome line in the back. This is to recreate the original key line. With both the arm and the back keying into place, progress should be easier. It is getting a little more finicky getting the figure in and out of place now.



After working the clay into the space between the back and the window edge, I trim down the excess and make sure that the remaining clay is secure.

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CAREFULLY removing the figure, I add the detail layer to the arm and bring the clay up into the section added to the back.



After baking, the arm and the back line up perfectly! Finally, I feel like the worst is over and quickly move onto the head. I'm worried about the tight fit and I cheat the head a little to the small side out of pure fear. I'm sorry here, I lost the photo for the head stage!

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Anyway, it didn't work out that well because the head still wasn't far enough out of the cab. I have to break the clay around neck, reposition the head, and rebake.

After baking, the arms, the back and the head all seem to be in the right places so I can go ahead and enlarge the face, but it would be tempting fate to give this fellow a larger hat!



I hope you'll forgive me for rushing this guy through. I'm doing him in 1:22.3 (maybe even a hair smaller), so he doesn't really have a place in Rogue County, he's just for



illustration here. He doesn't look too happy about it, either! Better brush him out and get him done!

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While he's not all that easy to get in the cab, he does sit well now once he's in place and I'm content with his overall look.



The last sculptural step is his poor, forgotten left arm. I first positioned his hand on one of the controls, but realized it would make placing him even more difficult, so I kept it loose and out of harm's way.



Here he is in final sculptural form. While it doesn't outwardly look like a challenging pose, this was one of the hardest figures I've had to struggle through!



After a quick paint job, it's time for a couple of add-ons. I sculpted him to be smoking a cigar, which I usually just make out of the very end tip of a toothpick, but I've decided to give him a cigarette instead. Oh, and glasses as well! Out comes the wire! I'll be using two sizes here; one for the glasses and one for the cigarette.

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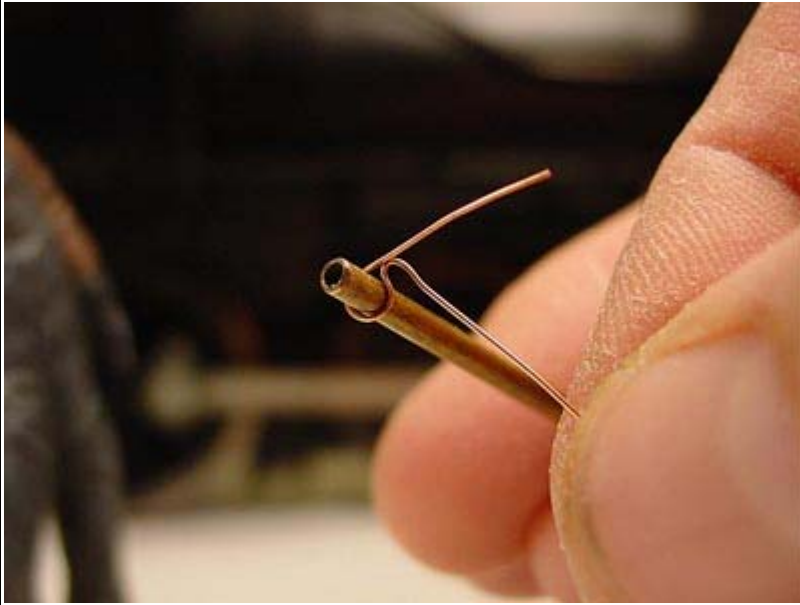


For the glasses, I take the thinner wire and cut a length of at least 2 inches. I cut it a little long because it's almost impossible to know exactly how much will be used.



In the middle of the wire, make a V bend by wrapping the wire around a thin nail or large pin. I'm using my sculpting needle. This bend will be the bridge of the glasses, so the bend should be just wide enough to fit over your figure's nose.

Next, bend a larger loop in the opposite direction. This will be the frame around



the lens itself. I'm using the handle of my sculpting needle which is just brass tubing.



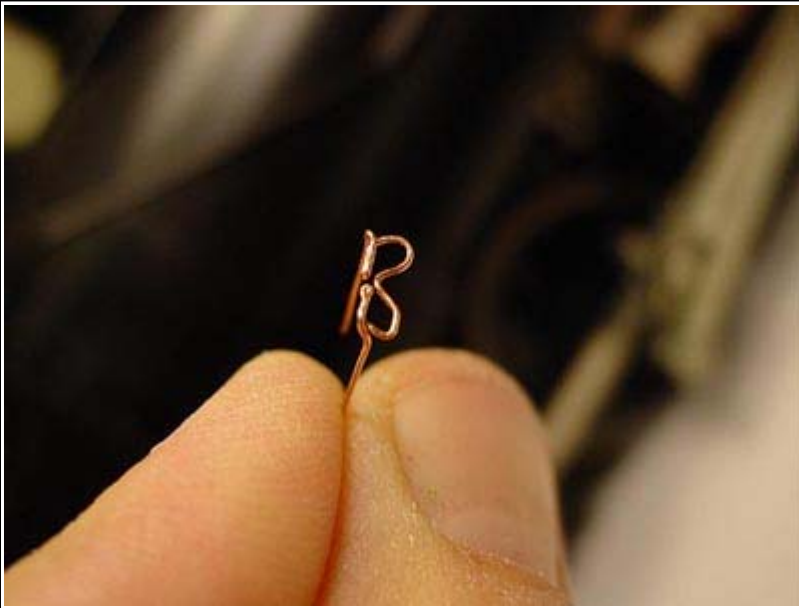
Bend a loop on the other side. You should have something like this at this point.

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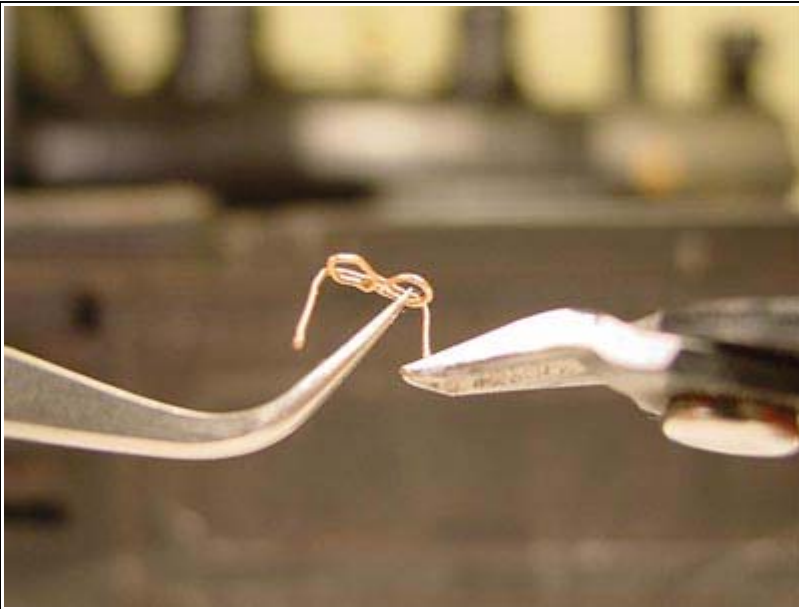


Now you can start to really size up the glasses on the figure. These are too large. Now comes the fun part.



Using strong tweezers, small needle nose pliers or any other small tool that will work, begin to form the lens framing area to the size and shape you desire. I'm making this set smaller and as you can see, I've doubled back the wire across the top. The ends will become the earpieces. I like to have the split at the bridge of the nose as it's a good area for adjustment. This is finicky work; sometimes you get it right away and sometimes you don't. Have patience, you'll get it.

When you've got the glasses looking the way you want, it's time to start fitting them. Just like an optician, you need to make sure all the right places are sitting the right ways. I usually do this in steps so I don't go too far too quickly. Once you make a mistake with these little accessories, it can be very difficult to get them back to where you want them.



I trim the ends down, but not as far as I think they need to be. I leave a little excess in case I need a little more adjustment. I fit and refit until it looks just right. I don't usually make full earpieces, I cut them short, just in front of the ears. The wire is usually too thick to look convincing if wrapped around the back of the ear.

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You can use any glue that dries nice and clear. I use Weld Bond Acrylic adhesive. As these glasses are a little thick, I add a little blob of glue at the top of the ear that the wire can disappear into. And another on the bridge of the nose.



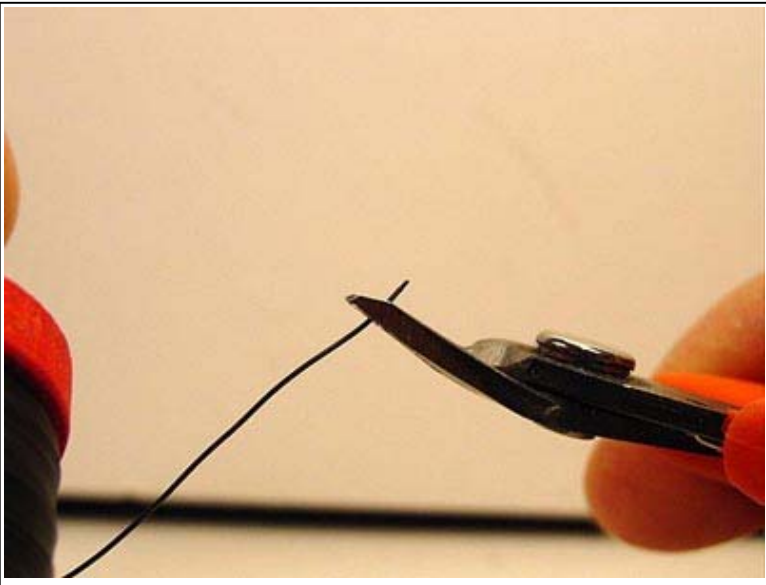
Once the glasses are in place, I add a little more glue over the ear to obscure the end of the wire. I also painted this copper wire silver. I should have painted it more of a gun metal to make them less obvious, but I was in a hurry. Sorry.



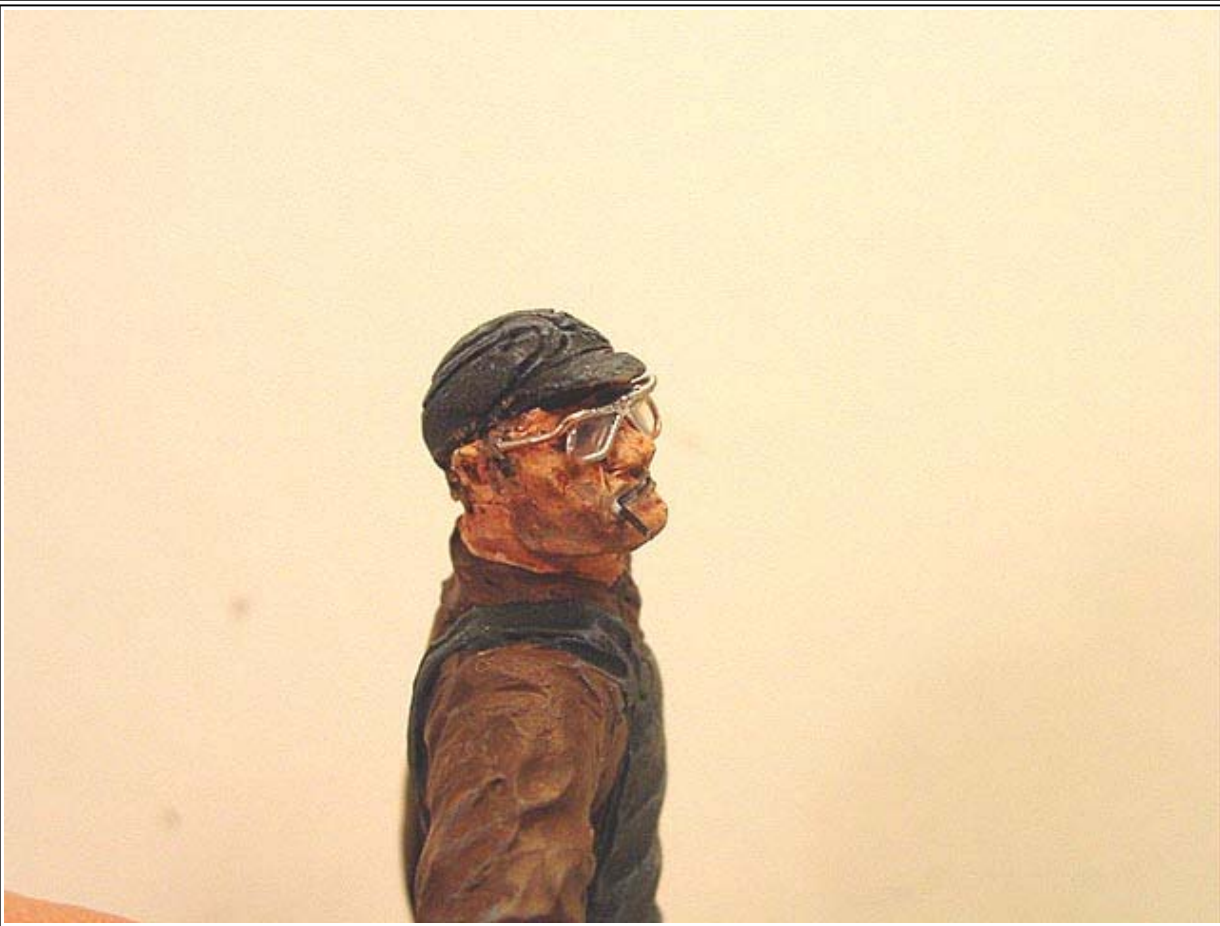
You can leave the frames empty if you like, but I like to have clear lenses, so I add a bit of the Weld Bond in the frames and smear it around until it forms a film. I've also used Polyurathane Gloss Varnish. They both work well.

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The cigarette. I hate the things myself, but it was a big part of life back then and train men seemed to be smokers from what I've seen, so a quick clip of wire....



A dab of glue.....



And some pale gray paint , slightly darker for the ash, and he's a smoker! I don't use straight white as it's just to harsh in this small a scale.

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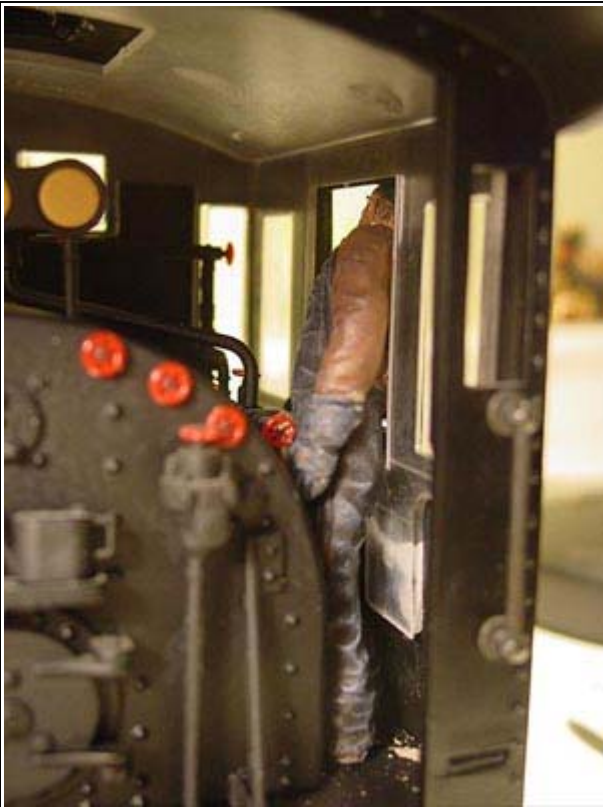


Now to get our engineer in the cab. Not quite as easy as it sounds. He goes in horizontally, above all the valves...



Then his head goes up forward all the way. A twist to the right brings his elbow through the window....

And lastly, he has to be pushed up and center to get his feet in line before lowering him into position!



He's in! And believe me, there's absolutely no reason to have to glue this figure in place! He's got to be pulled out to get him to move!

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Well, we did it. We fit almost a whole figure (minus a little bit of leg and foot!) into what is probably the tightest space in a largescale cab! Now it's your turn!

The Case For Painting Garden Railway Figures

I know some of you like to use the various colors of polyclay as the various parts of your figure; beige for skin, blue for jeans, black for shoes, brown for hair, etc. Whether it's because you like the look of the clay or because you don't like to paint or feel you can't do a good enough job, I just want to point out a potential downside to that approach;

Here's a figure I did as a test years ago. It's been outdoors for probably six years now. It doesn't have any armature and that's why his legs have curled. The point is about his skin.



As a joke, I gave him Luke Skywalker's racing helmet last year, which covers his bald pate, ears, forehead and eyes. Now here in Santa Barbara, the weather is quite mild and the area he was sitting in only received very partial sunlight, even in the height of summer. That changed when the trees were trimmed.

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He got tanned! This only happened over the course of two months, as far as I can tell. He got solid sun every day for that time and the UV seems to have baked him a little more than necessary! Notice that not only is the color changed, but the surface texture is becoming irregular by comparison to his baby soft looking upper areas. So take this as a warning! If you are planning on leaving your polyclay figures outdoors for any length of time where they will be in direct sun, consider giving them a protective coat of paint!

Making A Texture Pad

Here's a sculpture of the Creature from the Black Lagoon I did years ago. The reason I'm showing you this model is because of all this;





Texture! Lots and lots of texture! Like the original suit for the movie, the detail texture is repeated over each section.

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I wanted to be as accurate as I could when I did this sculpture, but the thought of sculpting all of this surface detail was imposing!

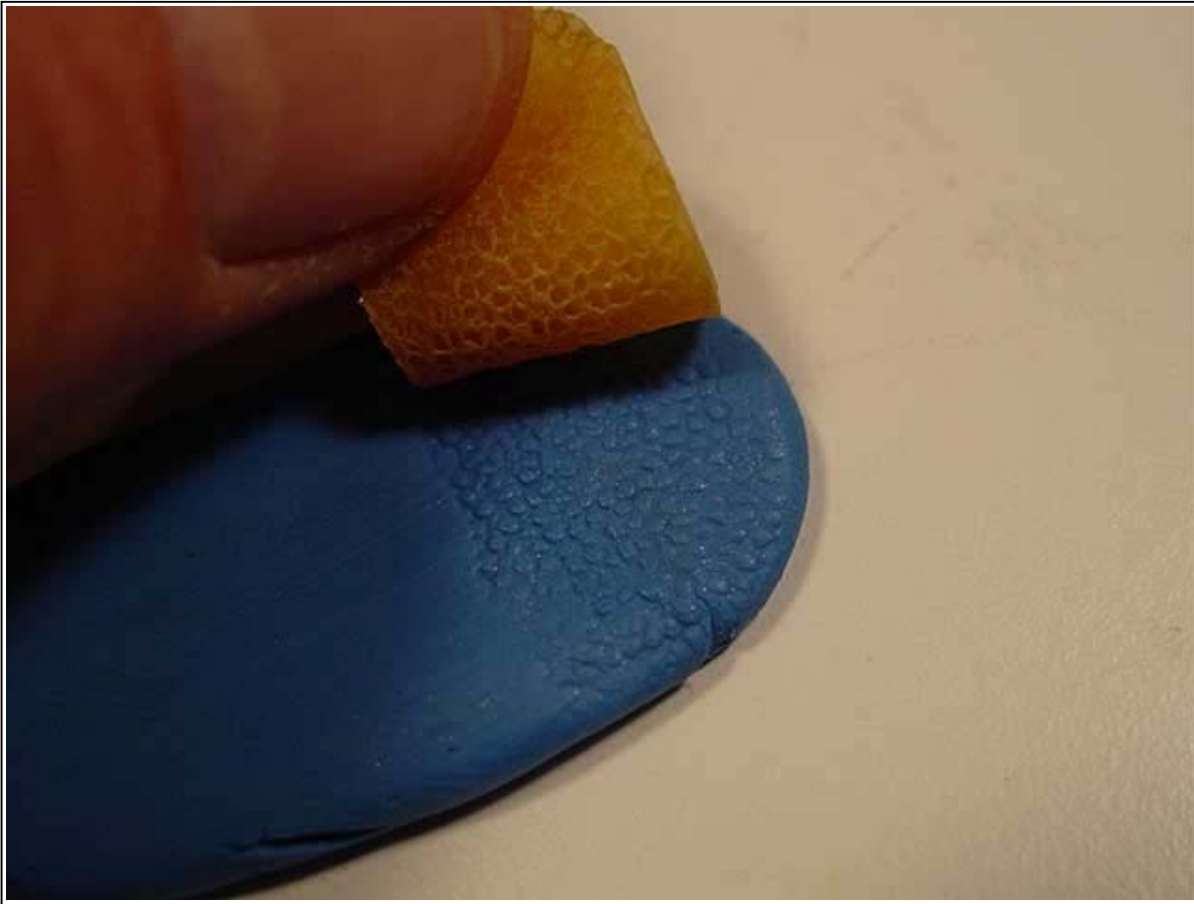
So I made these. These are



texture pads. Texture pads are used to easily add a level of detail or a specific pattern to a sculpture without the painstaking work of carving every line. They are very, very handy items to have if you do a lot of sculpting! These are made of latex, but it's just as easy to make them out of a flexible polyclay.

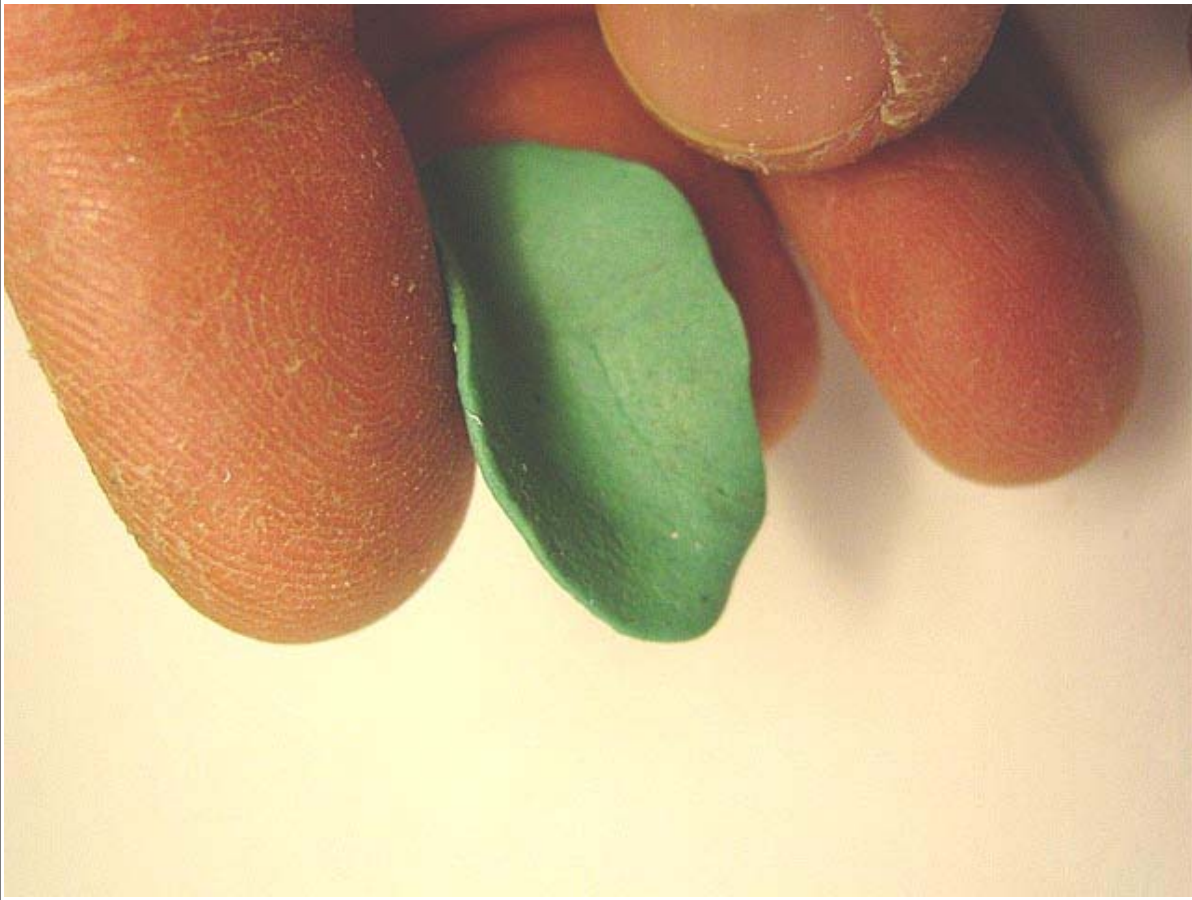
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To add texture to uncured clay you simply press the texture pad into the clay and peel loose as you see here. Let's make a texture pad.

Take a small ball of flexible polyclay and flatten it into a very thin pancake. The thinner the texture pad, the easier it will be to get into tight corners. Also, I've found that the



flexible polyclays have a tendency to stiffen somewhat with time. Elasticlay seems to stay flexible the best.

Next, simply press the pancake onto the texture you want to replicate. Here I'm using a piece of rigid polyclay with a texture I've prepared ahead of time. You can take a texture pad off



almost anything with texture on it, as long as it's stiff enough to resist the pressure of the polymer clay being pressed into it. Carefully remove the thin, unbaked texture pad and gently lay it flat in the oven and bake it.

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Once the pad is baked and cooled, moisten a bit of polyclay and test your new pad. This one will come in handy when I get to do some of the strange critters roaming Rogue County!

Texture pads can be made from cloth, fruit (don't laugh! Fruit has some great textures!), toys...well, almost anything! Besides being able to add a level of detail to your figures (won't your friends marvel at the cloth detail on your figure's clothes!), texture pads can be used on many accessories as well as for making replacement parts for your trains! What a texture pad is, is really a kind of mold. And for flat surfaces, it works wonderfully. But for more ambitious applications we need to move to the next level of making a true mold.

Making A Polyclay Mold!

It is possible to use flexible polyclays as a mold-making material for certain uses. I've only used them as "Push" molds, i.e. molds that you push uncured polyclay into and then remove the formed clay to bake. I'll give you a quick example here. These molds are really best for molds on items with few details and no undercuts. However, the example I use here has detail and undercuts, just to try and push the envelope on this method.

Our subject will be none other than Rogue County's visiting Professor Emeritus! I'm going to be bold, tempt Fate once again, and do a two piece mold so that I can make a full copy of the Professor's head. I'm planning on creating a few more adventures for him in his search for a Lost Kingdom and I'll be needing a few different poses with different garb, so I'll be needing several head casts.



Here's the good professor with a coat of corn starch on his head (the area I'm molding). Most people suggest using a powder of some sort as a separating agent between the cured and uncured polyclay, so I'm using it in this example. But I really prefer water. The choice is yours. DO NOT use any standard mold releases for plastic casting! Especially any that use an oil or grease of any sort (many of them do). The oil in the release will actually help the raw polyclay adhere to the cured polyclay!

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With a quick, sharp breath, blow the excess powder off, as if you're blowing out a stubborn candle. There should be only a nearly invisible layer of powder left on the figure.



Knead some flexible polyclay until soft. I'm using Eraserclay here because I have some samples and I'll never use it for erasers! Sculpey SuperFlex and Elasticlay are better choices. CAREFULLY press the clay down onto the surface of the figure, being sure to start at the highest point and working your way down. Use more clay than you think you'll need. The clay should be at least 1/4" thick all around and more at the front. I'm only doing the front half of the head in this step.

When the clay has been pressed down well and evenly, I trim off the excess.



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From the back, it should look something like this. Try and keep the edge of the clay fairly even if you can.



I flatten out the front and back of these molds so that it will be easier to press the halves together evenly later on.

Now comes the tricky part. If the clay is really soft or warm when you put it on, you may want to let it cool and stiffen slightly before trying this; CAREFULLY work the edges of the clay loose until you can work the entire piece free. Remember this is uncured clay and anything you distort at this point will ruin the mold. Once you feel confident that you've got it right...BAKE.



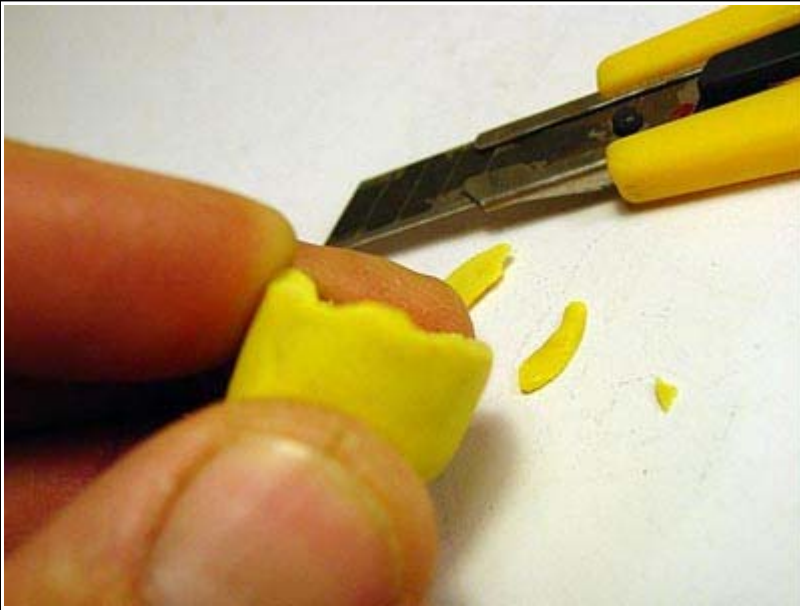
After the front has cooled, refit it on the figure and make sure it's a good fit. If it really isn't, throw it away and do it again.

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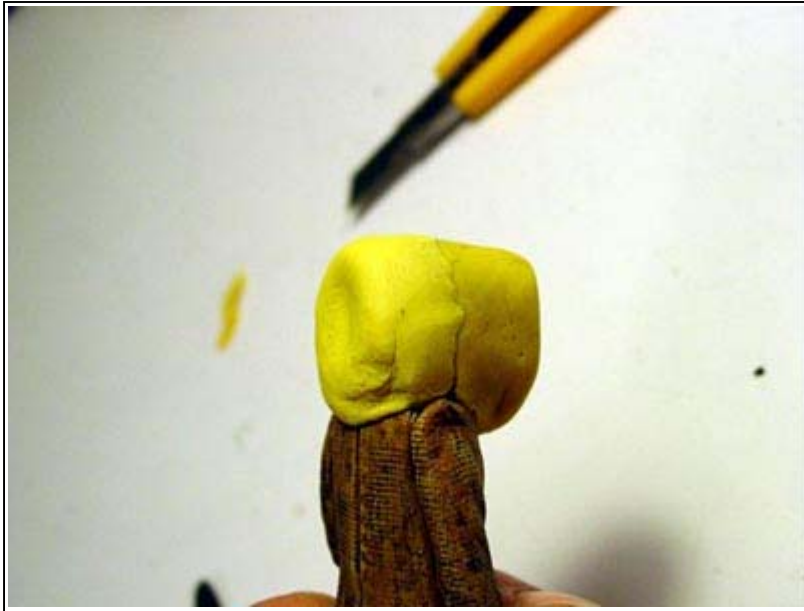


Check the inside of the mold for any obvious distortion or chips from the original.



Now trim any irregularities off the back of the mold. If the surface that will contact the back of the mold is too even you'll need to cut a key in somewhere. This can be a simple, short wave in the outline as seen here. This will insure the front and back matching correctly.

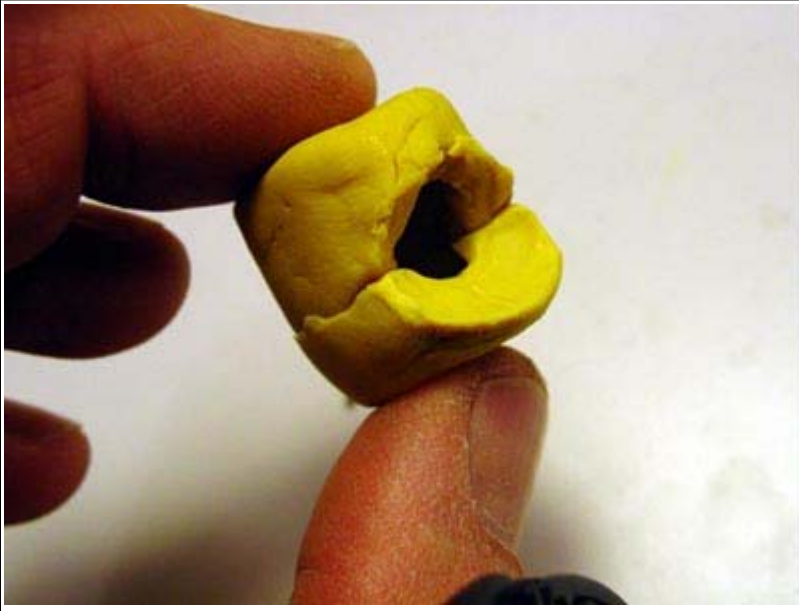
Now place the mold back on the figure nice and snugly. Paint a layer of water around the edge of the mold so additional clay doesn't stick to it.



Add the clay to build the back half of the mold. Be sure to press firmly and shape to match the front. CAREFULLY remove the back half and bake.

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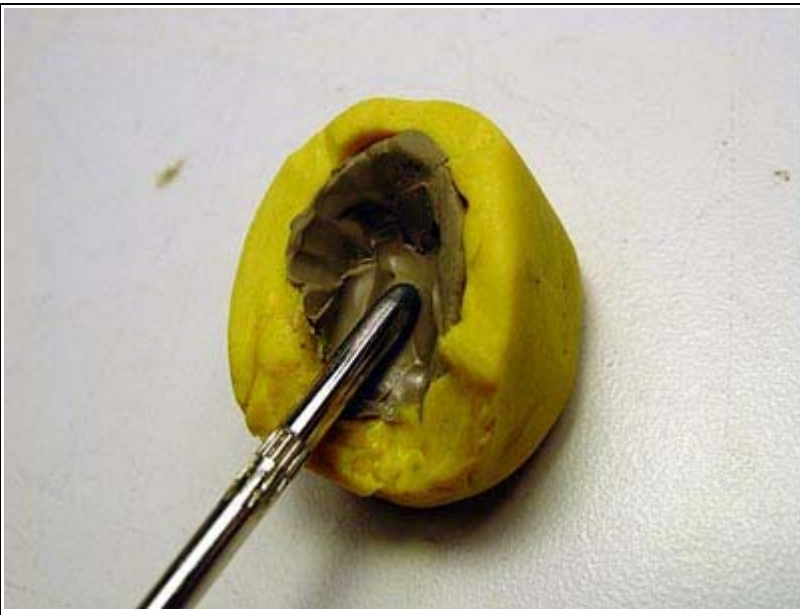


When both halves are baked, put them together to check the fit. The interior surfaces should line up perfectly. Congratulations! You've made a mold!



Let's see if the mold really works. To cast a head, I first took an old extra bit of armature and put a layer of clay on it and baked it. There's a lot of room around it in the mold. Just what we need.

Knead a small pancake of clay big enough to fill in a thin layer in the mold. Press it gently into the mold after you've "watered" it.



Using a round edged tool, work the clay into the detail surfaces of the mold. Take your time and go over it a couple of times to make sure you haven't missed any areas.

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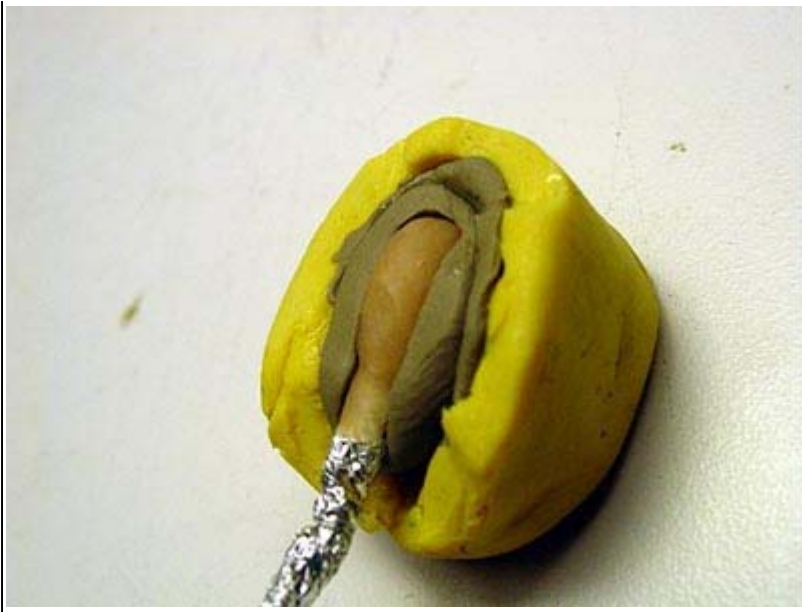


Add clay to one side of the head armature. This will be pressed into the clay that is already in the mold, so a little more than you think will fit is good.



Place the armature into the mold. There should be enough clay to make sure this half of the mold will be filled .

Here's the push in push molds! Gently but firmly push the armature into the mold, pressing the clay into any open areas. Make sure the armature sits properly, so that the "neck" sits in the center of the neck opening. Make sure some of the "head" section of the armature sticks out enough fill a little of



the mold's back half.



Now work the detail layer into the back half of the mold.

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Add some clay to the back of the armature and you're ready for the hardest step of the process...



Pressing the back half is more critical than the front half. You need to press firmly enough to fill the gaps, but not so firmly that you distort the clay in the front half. Work slowly and use small twisting motions to work the clay around. The excess clay should work its way out of the large neck opening. I've got some coming out of the top of the mold as well. Work the mold until you feel sure that both halves are well seated to each other.

Pulling the molds halves away from the raw clay casting isn't as difficult as it might seem. Just go slowly. A drop of water in the mold as you work it free will help the clay slip out of the mold. You may have to cast a couple of pieces before you get a feel for it, but it does work and it's simple. I've tried a more ambitious mold here than I would ever suggest you try. There's some distortion in this casting here, but considering the undercuts and detail, it's come out quite



well. It looks like the good professor's further adventures are assured!

Keep in mind that poly clay is not silicone and almost anything you try to cast in it will want to adhere. I suggest you stick with casting polyclay in polyclay molds! Good luck!



Well, that about wraps up this chapter! Don't forget to post any questions in the Figure Forum! Next



chapter we'll cover women and children. Until then, I expect to see a lot more engineers and passengers!

Chris

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