The S Resource

NEWS, REVIEWS, INFORMATION TO USE

April / May 2015
Volume 1 #4

Resin Kits
S West 2015
Getting Lucky
Layout Planning
Box Car Out Buildings
The Choctaw Rocket in S Scale

THE S RESOURCE
NEWS, REVIEWS, INFORMATION TO USE
S SCALE

Bill Of Lading

Published Bi Monthly

The Model Railroad Resource LLC
Plymouth, Wisconsin

Editors

Glenn Guerra Dan Dawdy

Copy Editor

Amy Dawdy

April-May 2015
Vol 1 #4

Welcome to the online S Scale Resource magazine. The magazine is presented in an easy to use format. The blue bar above the magazine has commands for previewing all the pages, advancing the pages forward or back, searching to go to a specific page, enlarging pages, printing pages, enlarging the view to full screen, and downloading a copy to your computer.

Front Cover Photo

A Southern Pacific locomotive on the S module layout in California at S West waits to pull out.

Rear Cover Photo

Jim Kindraka's Choctaw Rocket pulls into the station on Chuck West's Des Plaines Valley S Scale layout.

Page

Advertisers Index

The Model Railroad Resource LLC publishes *THE O SCALE RESOURCE* also.
Be sure to take a look. There are many articles in our magazines that are not scale specific, and will be of interest to you. Click this announcement to see the magazine online.

Editorial Comment

Well it looks like spring may be here, and after the winter some people have had, it will be welcome. In February, I went to O-S West in Santa Clara, California. In the last issue of *The O Scale Resource*, I covered the O Scale part of the show. In this issue of *The S Scale Resource*, I have a few photos of the S Scale part of the show. There were some manufacturers at the show and tables for dealers. This show is held every year, and I would encourage S Scalers who can attend the show. There are a lot of S Scale items available, but there are few hobby stores any more. In order to see some of these products, you need to attend these shows. In addition to seeing the products, you get to meet other people who have similar interests. While I am on the topic of the social side of the hobby, I will tell you about an article in this issue. Jim Kindraka has been coming over, and we have been working on kits together. We have a good time visiting and building models. Jim had some resin kits he was working on and we started building them. As we were talking about the kits and some ideas on how to put them together, Jim thought it would make an interesting article. In *Resin Kits*, we talk a little about how they came about and how they are made. Then, we talk about some things that will help when building one of the kits. I borrowed a kit from Matt Gaudynski to photograph for the article and it looked like fun to build, so I did. I sure hope Matt doesn't mind. Speaking of Matt, we went to his house to see the progress on his layout. I liked the planning and thought that went into the layout before construction began. This planning is paying off now that he is building. In *Layout Planning*, we look at what Matt has done so far. Those of you thinking about a layout will like this article. Planning and doing research makes any project come together easier. Another example of planning is *The Choctaw Rocket*. Jim Kindraka has always been a Rock Island fan and wanted to model some of it. He also likes passenger trains, but modeling a big name train seemed like too much for most layouts. Jim was looking for a name train that was shorter, and found it in the *Choctaw Rocket*. Take a look at how he researched and modeled this train. Our last article provides some research material and ideas, and is entitled *Box Car Out Buildings*. Many freight cars get sold and used as something else. In this article, we look at old box cars that are being used as buildings. A model that is out of your era of modeling, or not detailed enough, could be used on your layout as a building. Take a look at some of the different uses. Lastly, sometimes you get lucky. Jim Kindraka takes a look at a damaged model, and discovered that it made a nice model of an abused prototype car. Take a look at *Getting Lucky* to see that accidents do not always turn out bad.

That wraps up this issue. Thanks for taking a look. Dan, Amy, and I will be at the 2015 S Spring Spree in Dayton, Ohio May 8 and 9. We are looking forward to meeting some of you at the show. See you there!

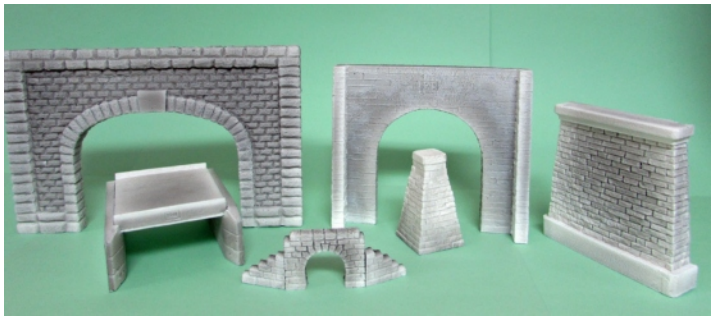
Glenn Guerra

News And Reviews

Mike Calvert from Gilmaur Models was in Chicago for the O Scale Meet March 14 and 15. He visited Des Plaines Hobbies on Sunday afternoon to show some of the local S Scale guys his new S Scale GE U-18 model. Ron and Sue had some snacks at the store, and we all had a good visit. After, we went to Matt Gaudynski's house to see the progress on his layout. I was tired after 3 days at the show, and had a 3 hour drive home so I left early. The rest of the guys went to Chuck West's house and ran Mike's new model around for a while. It was a good impromptu get together.

The guys are talking models at Des Plaines Hobbies as they look over Mike Calvert's new model.

Chuck West, in the plaid shirt, and John Griffin watch Mike Calvert's U-18 pull a train around Chuck's layout.



Steve Wolcott from Pre Size sent us a photo of some of the S Scale stone work items he has. These are nice sharp castings, and good details for your layout.

In the December 2014-January 2015 issue of *The S Scale Resource*, we took a look at grain elevators. Gary Childress sent us a photo of a complex on his layout. The grain bins are by Ertel with Walthers HO scale conveyers and vent blowers. They make a nice scene.

Next year, the Super Bowl will be in Santa Clara, California on the same weekend as S West. The organizers of S West have decided to move the show date instead of the location. For 2016, S West will be May 5-7 at the Santa Clara, California Convention Center. Mark your long range calendar and plans.

Don't forget the 2015 Spring S Spree coming up in Dayton, Ohio May 8 and 9. The event is hosted by the Miami Valley S Gaugers. See their website at http://www.trainweb.org/mvsg/Spree15/spree15.html for an entry form and other info.

The people at the National Association of S Gaugers tell us that they have seen an increase in membership in the last 6 months. Your membership in NASG goes to help maintain standards and promote the hobby. For more info see their website at www.nasg.org

Mark Meeks from Union Station Products tells us that he will custom make any stream line passenger car sides in S Scale. If he already has the art work, there will be no additional fee. If art work is required, there may be some charges to produce the art work. Take a look at www.unionstationproducts.com

American models has some new paint schemes available for their GP-9 models. Check the website for more information at www.americanmodels.com

Questions or comments?

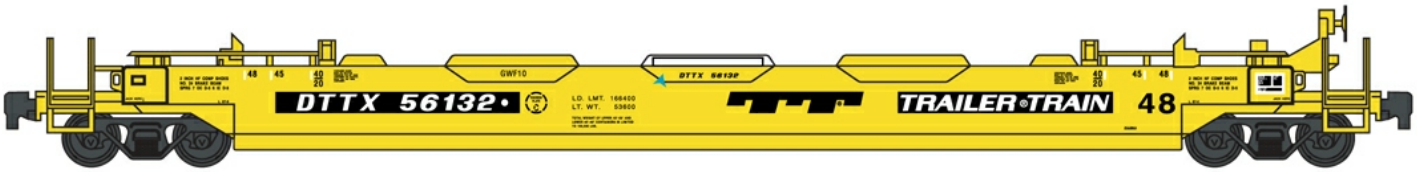
E-mail us here.

Des Plaines Hobbies
S Scale America

Husky Stack Cars

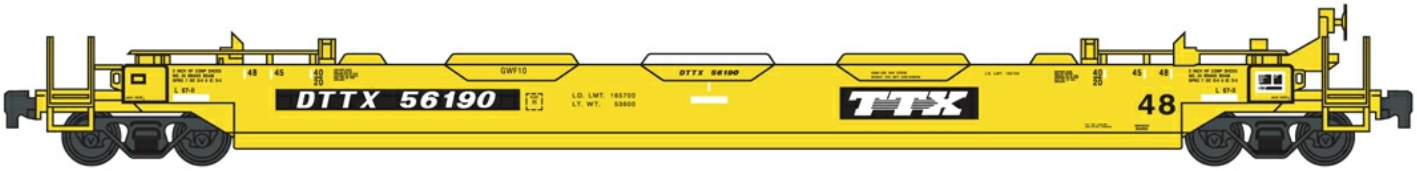
The New S Scale

Three Paint Schemes
American Flyer Compatible come with Flyer compatible trucks/couplers
Scale cars come with scale trucks and Kadee couplers
List: $44.98



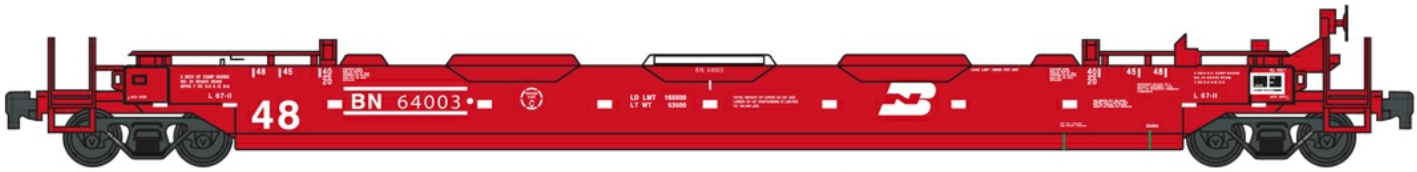
Trailer Train - Hi Rail	
SSAH3002.1	#56028
SSAH3002.2	#56075
SSAH3002.3	#56132

Trailer Train - Scale	
SSAS3002.1	#56028 few left
SSAS3002.2	#56075 few left
SSAS3002.3	#56132 few left



TTX - Hi Rail	
SSAH3003.1	#56190
SSAH3003.2	#56231
SSAH3003.3	#56345

TTX - Scale	
SSAS3003.1	#56190
SSAS3003.2	#56231
SSAS3003.3	#56345



Burlington Northern - Hi Rail	
SSAH3004.1	#64003
SSAH3004.2	#64007
SSAH3004.3	#64016

Burlington Northern - Scale	
SSAS3004.1	#64003
SSAS3004.2	#64007
SSAS3004.3	#64016

Arizona & California - Hi Rail	
SSAH3005.1	#100004
SSAH3005.2	#100020
SSAH3005.3	#100023

Arizona & California - Scale	
SSAS3005.1	#100004
SSAS3005.2	#100020
SSAS3005.3	#100023

Des Plaines Hobbies 1524 Lee St Des Plaines, IL 60018
www.desplaineshobbies.com 847-297-2118

By Glenn Guerra

The S West meet is held in conjunction with O Scale West in Santa Clara, California every year. This year the meet was held February 5-8. The show is one of the few S Scale shows in the west, and is definitely worth attending. These model shows are a good place to meet other modelers and to see products that are not always on the hobby shop shelf. This year, River Raisin Models, Pre Size, and Gilmaur Models were there as manufacturers. In addition, there were 16 tables of S Scale items for sale.

Some of the members of the NMRA special interest S Scale group had a module layout set up. Plus, they also had a meeting and clinic.

Some of the guys set out their models on the S Scale module layout at S West while Dick Karnes looked on. Dick is the new editor of the NMRA S Scale special interest group newsletter.

As you would expect, the Southern Pacific Railroad is popular in the west. This freight train was running on the S Scale module layout at S West.

Mike Calvert of Gilmaur Models had his new S Scale GE U-18 locomotive model on display. Mike has a lot of experience producing O Scale brass etch kits and is bringing that experience to S Scale. This is his first S Scale model.

Some of the varied S Scale products on display at S West.

Resin Kits

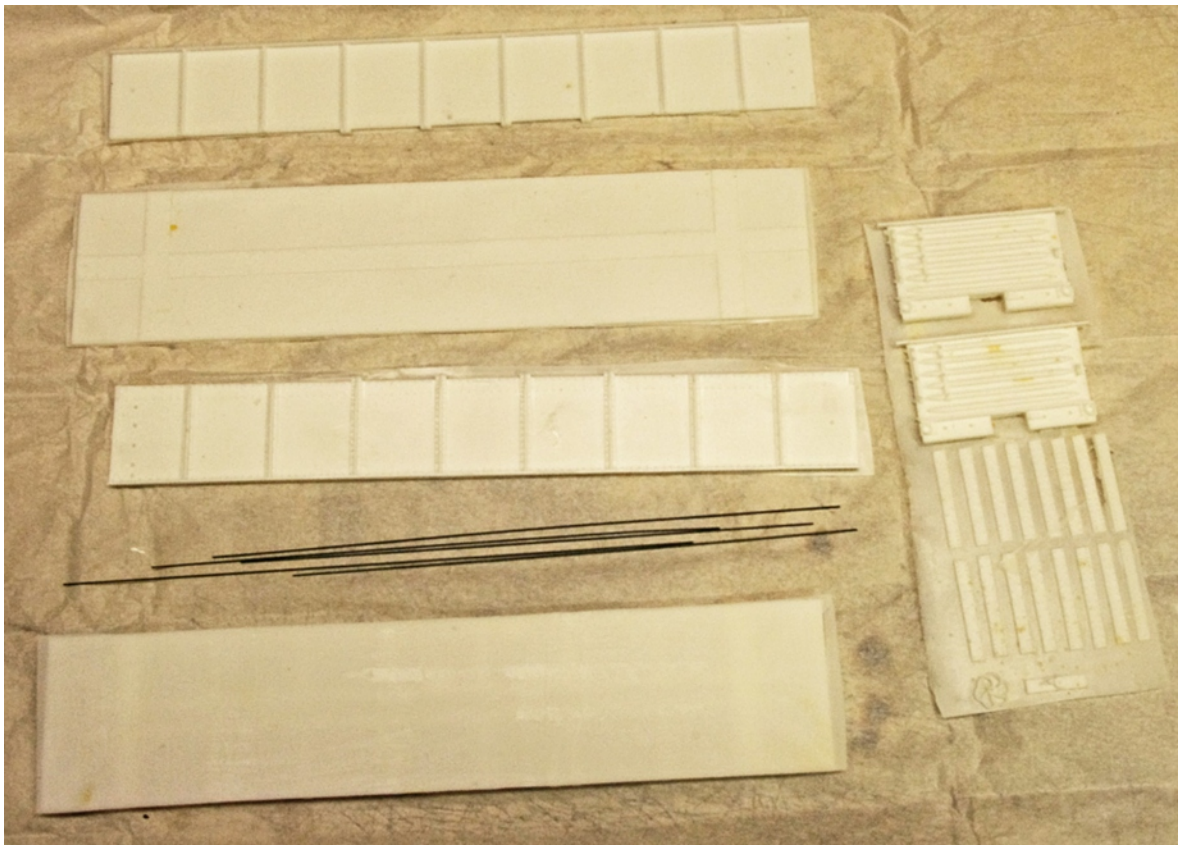
By Glenn Guerra

Jim Kindraka and I have been doing some modeling together lately. Jim had some resin kits, and brought them over so we could work on them. As we were working, we started talking about resin kits and how they are made. I have a little experience with making them and was explaining some of it to Jim. We thought it might be of interest to other modelers, and it might help them putting their models together.

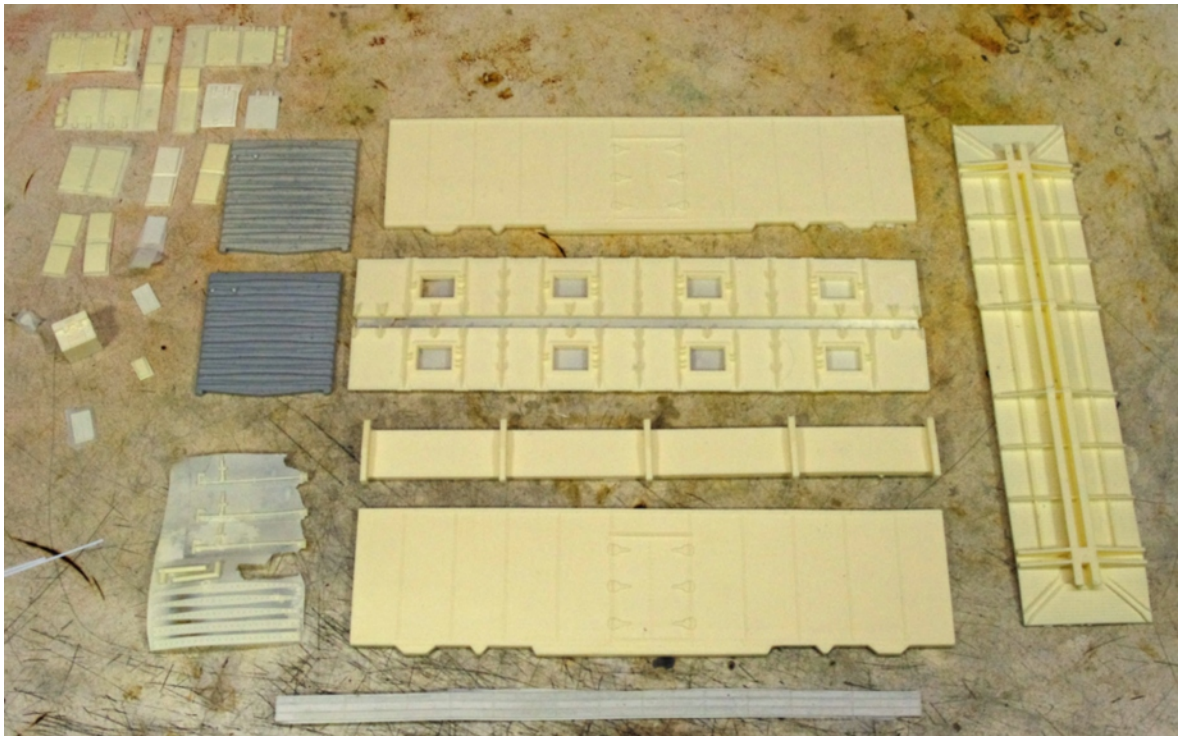
First a little history because I like the history of things. Some of the first resin casting I am aware of takes place in the late 1940's. At that time, polyester resin and fiberglass cloth were used to make things. You are all familiar with fiberglass items such as boats. Most of these products were, and are made, in molds that are also made of the same material. These molds are rigid and the parts that come out of them need to have some draft on them to release from the mold. Soon there were other formulas of the polyester resin developed for solid casting. When you add the catalyst to polyester resin, the resulting chemical reaction can generate a lot of heat. If the part you are making has a lot of mass, then the heat will not dissipate fast and the part will get too hot and even burn. When you are making a boat or truck top, there is enough surface area to dissipate the heat and the part will not over heat. This is why special resins were developed for casting larger objects. This lead to casting clear blocks with things in them for desk ornaments. One of the first people offering these products to the hobbyist was the Castolite Corporation. The Castolite Corporation was sold to John Kunzie, who was John's Lab, and selling ballast to the model train people in the 1960's. John started to work with the resin adding colors and fillers to it. The polyester resin has a high shrink ratio that is not consistent, making it undesirable for masking a lot of parts that needed to fit together. The fillers did not shrink, and since less resin was used, there was less shrinkage. The next big improvement was RTV rubber. Now you could make a flexible mold that you could cast polyester resin in. John sold powdered metal fillers that were added to the polyester resin, and parts were cast in the RTV molds. The result was impressive. John cast builder's plates for the steam locomotives at the Illinois Railway museum using polyester resin and powdered brass. When you polished the casting with fine steel wool, it looked just like a cast bronze original. I might add here that John was not developing these products, but was introducing the hobbyist to them and making them available to the hobbyist. The money for development of these products came from industry. These filled resins were being used in foundries, for example, to replace wood patterns. At the same time John was doing this in Woodstock, Illinois, Bill Clouser was using these materials in St. Louis, Missouri. Bill was a commercial model builder, and these materials were a help to him. In the late 1960's, Bill produced some O Scale models made in RTV molds using epoxy resin. At the same time, John was helping American Models in Crystal Lake, Illinois make some O Scale Passenger cars with powdered aluminum filled polyester. The next improvements were silicone rubber molds and the urethane casting resins that we are familiar with today. The attractions that hobbyists and manufacturers have to this type of casting are the low up front tooling cost and the ability to cast parts that have no draft and even some under cuts. When talking about some of the history of resin kits, you need to mention Al Westerfield. Al was very prolific in the number of kits he produced and the quality of them. He brought the resin kit to the hobby as a viable alternative to mass produced models.

This is a pattern and mold that I made for some things I was working on. The green rubber mold is actually the size of the pattern, but the perspective in the photo makes it look smaller. One of the first improvements in mold making was to put a block on the rubber so the back of the mold was flat. By doing this, the mold laid flat when you cast the resin in it. The next improvement was to place a piece of glass on the rubber mold when you cast. This made the parts you were casting the correct thickness

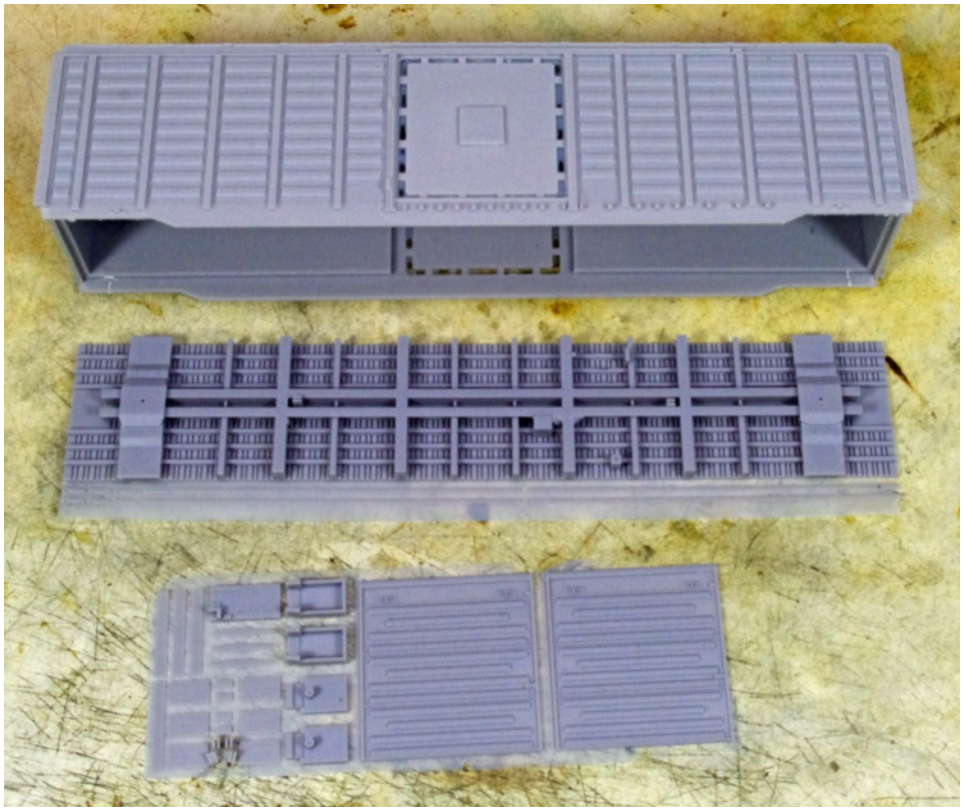
So, how do you make a kit with these materials? Usually, you start with a pattern. This is part of the attraction. The patterns can be made from anything that the silicone rubber will not stick to. Most of the patterns you are familiar with in model trains are made from styrene masters. Generally, the patterns are one sided which will make a one piece mold. The patterns are laid down flat with a raised edge around them and silicone rubber is poured over them. When the rubber has cured, it is removed from the pattern and becomes the mold. Now you have a mold to put some resin in. Most model kits are produced in one sided molds like this because they are simple to make and to fill. Two piece molds are possible, but they are more work to make and are difficult to get the air bubbles out of. When you pour the resin in the mold, there are small air bubbles that get trapped. One way to remove them is to pick at them with a toothpick which takes time. Another way is to put the mold with the resin in a pressure pot and pressurize it. This will shrink the air bubbles. When the resin has cured, the part is removed from the rubber mold and a new part is poured in the mold. Before we leave this topic, let me say that there is some two part mold casting going on. This usually involves slower curing resin which means that production is slow and this drives up the cost. So, this is the basic process. It sounds simple, but here are some of the problems.



Here is a kit for a gondola. Note the flash around the parts. This needs to be sanded off. If you cut it off around the edges, the parts will be too thick. I like to refer to this as, getting back to the design intent of the kit. The designer of the kit made the parts a certain thickness so they would all go together the way he wanted.



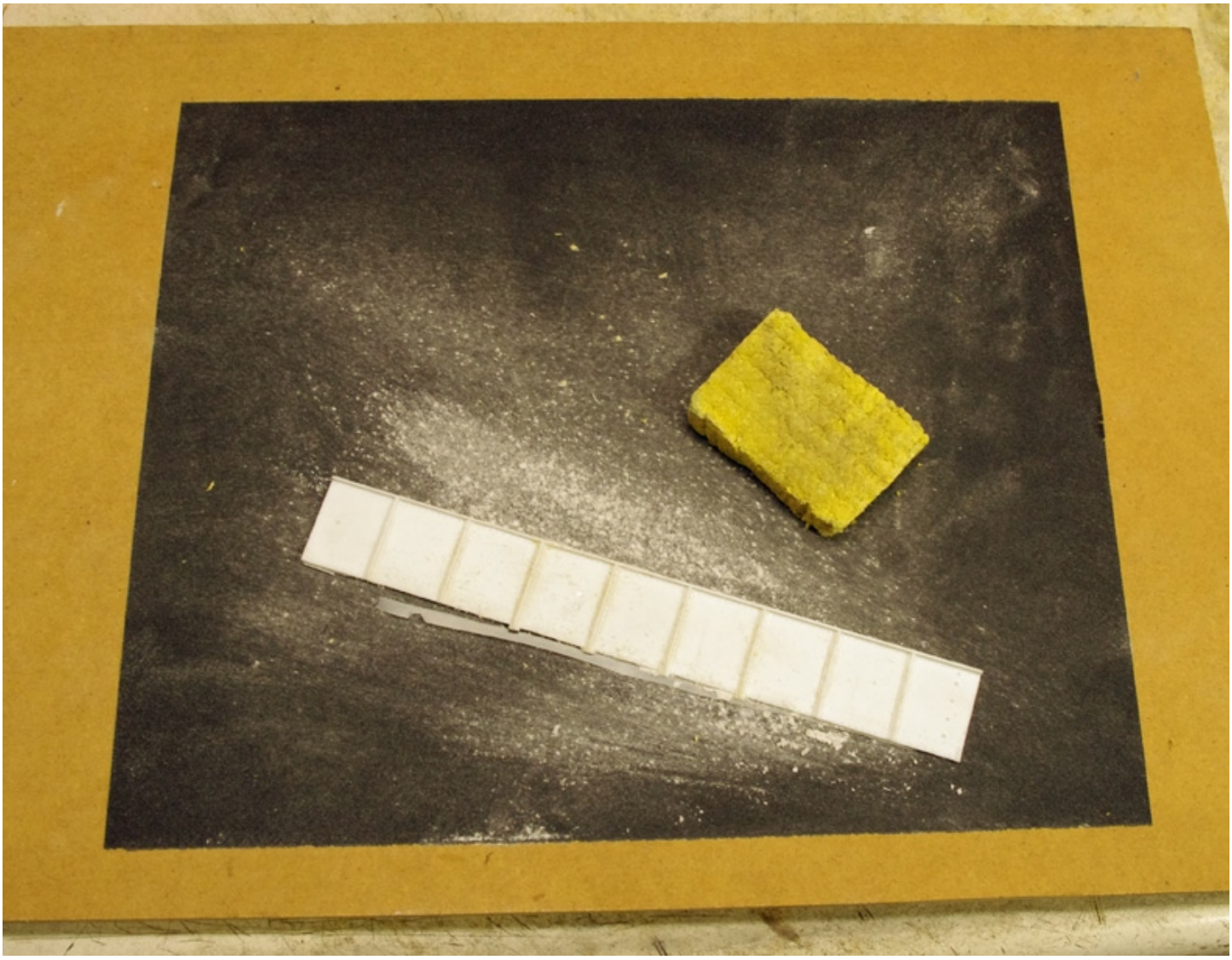
This kit will make a refrigerator car. Notice that there is some flash on the parts that will need to be sanded off. This kit has a warp in the frame. Sometimes the resin will curl. This can be fixed, and is not a detriment to the kit. To fix, just warm a piece of metal with very hot water and place the part on it. Weight the part and let it sit. That should take the curl out of it.



In this kit, the manufacturer has already assembled the basic body for you. The parts are cast flat in open molds and then assembled. Note the parts in the lower part of the photo will need to have the flash sanded off.

The basic one sided mold was developed first and is still used today. One of the problems with the one sided mold is how do you keep the back side flat? Some of the first mass produced kits had no control over this and the parts varied considerably in thickness. This meant that the modeler had to do a lot of fitting. This was such a big negative that it almost put an end to resin kits. This was solved by putting a piece of glass on the mold after pouring it so the parts were now a uniform thickness. To make this work, the mold is over filled and then the excess is squeezed out between the glass and the mold. This leaves a thin flash around all of the parts. Add to this that some resins expand a bit when they are curing, and that can also add some flash. So, flash is part of what you have to live with when working with a resin kit. Another way to look at it is, for now you need to put up with flash to get the model you want until better technology or higher volume produces a flash free kit.

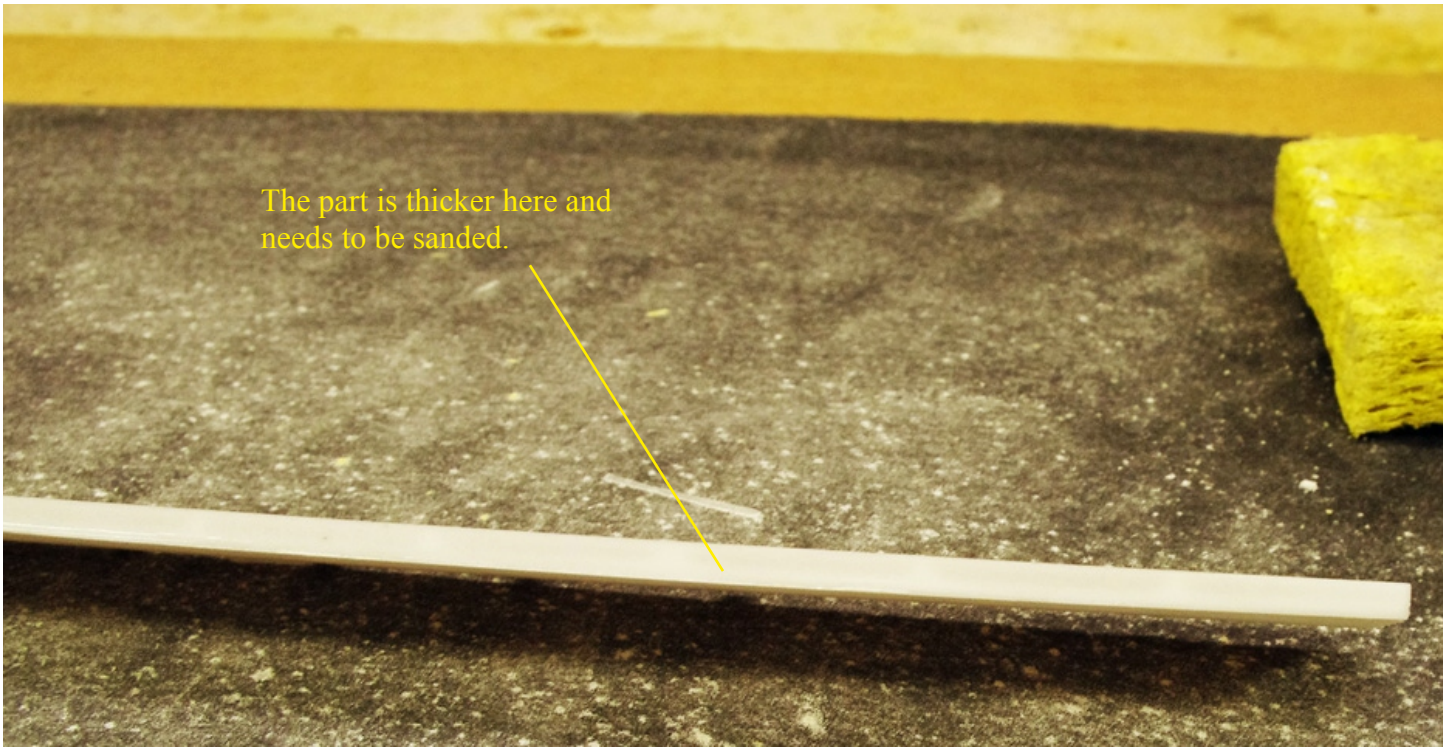
Another problem manufacturers have is shrinkage. There are a few things that cause the shrinkage problem. The molds are flexible and not rigid. Some resins will expand a little when curing and the mold can give, causing a change in dimension. This is usually very slight. A bigger concern is heat. When you start casting, your mold is cool. Each casting you make generates heat, causing the mold to warm and expand. On HO scale models, a 5% increase in length may not be noticeable, but on a S Scale model 5% will be. This will cause the side not to fit the roof. It also means that as you cast, the first part you make and the last part will not be the same size. Manufacturers overcome this by casting the whole kit at one time and keeping those parts together. They then cast another set. This way, all the parts of a kit will have been cast in molds that are the same temperature. Another problem is solvents from the casting resin. The silicone rubber mold material will swell when exposed to these solvents. One trick we used to do was to soak the mold in mineral spirits for a while and then cast a part. We could reverse the shrinkage, and get a larger part to use as a pattern. This is tricky to control and not practical for production, but it serves to illustrate how the solvents affect the molds. Once the solvent has evaporated from the mold, the mold will shrink back to its original size.



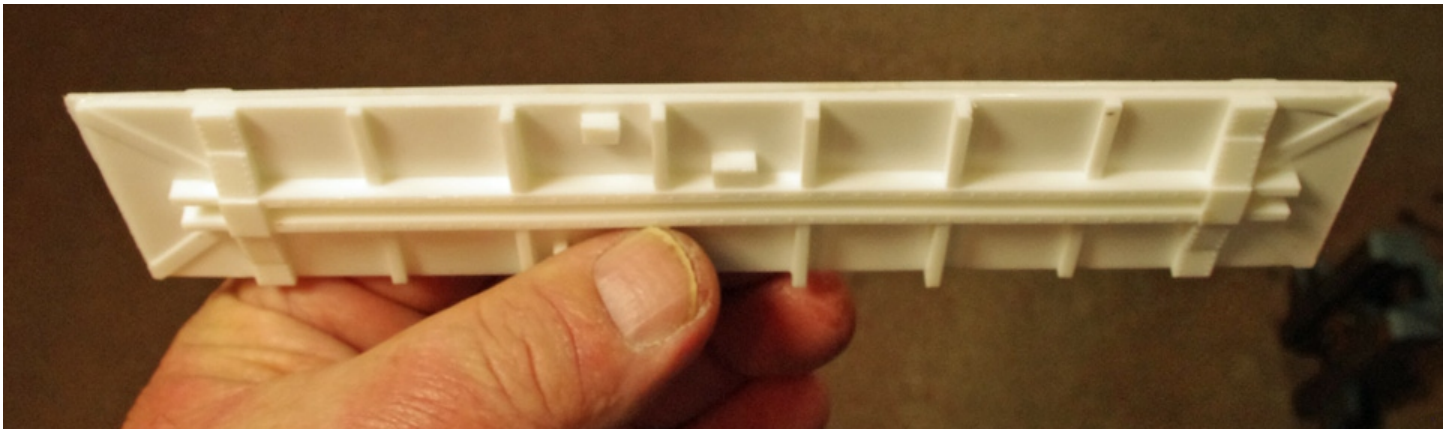
To sand the flash off the parts, Jim and I used this set up. We had a piece of 1/2" particle board that we glued some 220 grit wet/dry sandpaper to. I just used spray adhesive to glue the sandpaper to the wood. I used a dry sponge to grip the part while I was sanding it. When you first start, the part will be difficult to grip and move. As the sandpaper starts to clog, it will be easier to slide the part around.

Next, we should talk a little about the resin. As I mentioned, my first knowledge of this is the polyester castings done by John Kunzie and the epoxy castings done by Bill Clouser. Both resins produced good parts, and the kits and models they produced are still desirable today. As a business ,they were not good. The resin took too long to set and was expensive. Both items led to high production costs. Today, resin models are made with urethane. Like all resins, the urethane ones have a lot of different formulas with different properties. As far as the manufacturers are concerned, the resins cure quickly and the detail reproduction is very good. As a result, there are more models on the market today at a relatively lower cost. This is good for us as modelers. This is a very general look at how resin kits came to be and how they are made. Now let's look at some tips for putting them together.

Before you start, look the kit over and understand what the designer had in mind. Look at how the sides and ends will mate. Cars with simulated metal ends usually intend for the end to overhang the side a little. This simulates the metal end wrapping around the side of the car. If the floor of the car fits between the sides and ends, then the width of the floor becomes critical. You will want to consider these things when sanding and fitting parts. Once you have the basic construction figured out, it is time to start sanding off the flash.

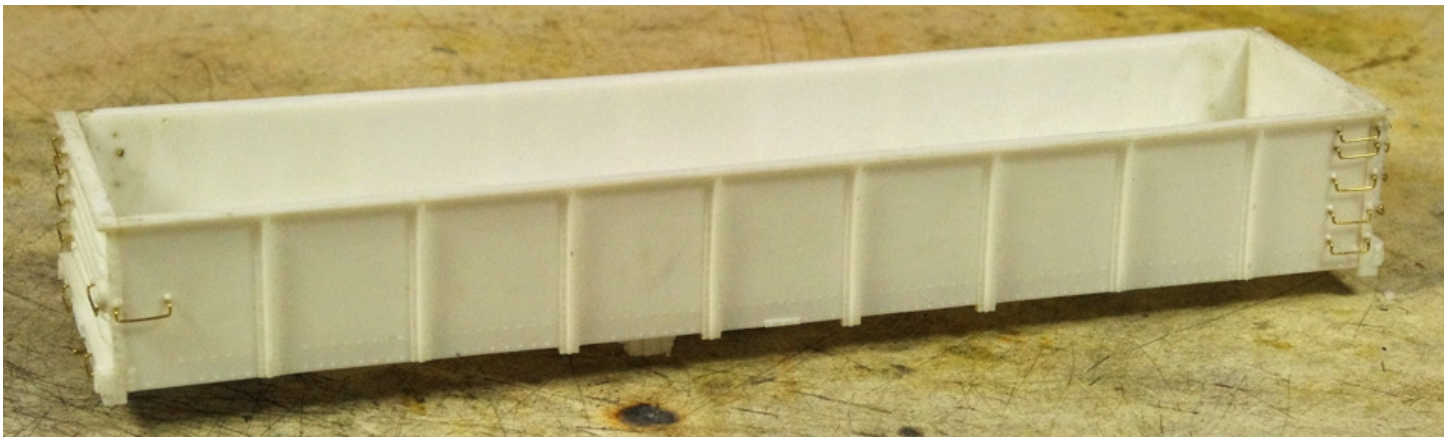


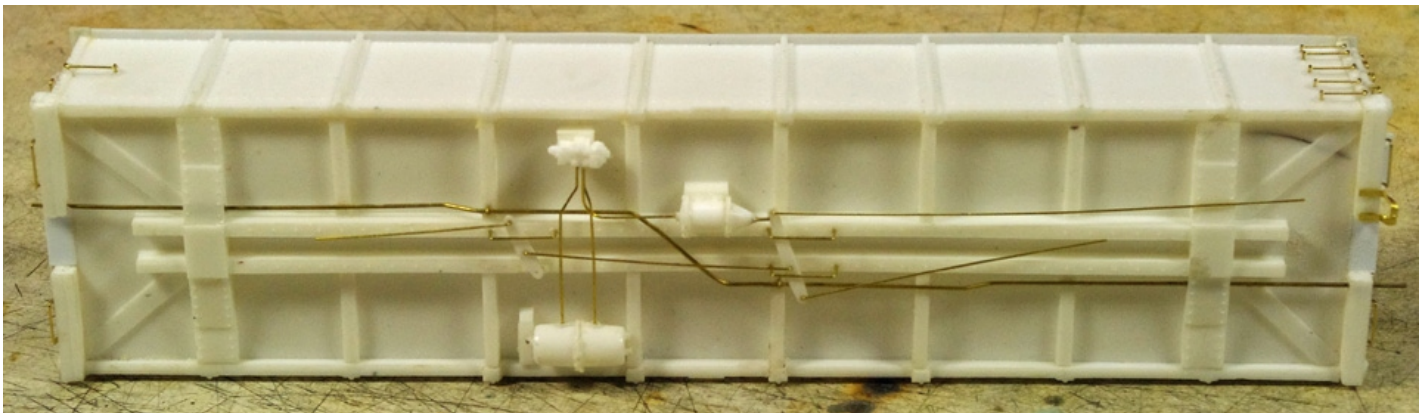
This is the side of the gondola as I was sanding it. Notice that there is a thick spot. Keep sanding the part with pressure applied to the high spots until the part is a uniform thickness. This will make your model look better, and will also get you back to the correct design of the part.



Shrinkage is a big problem for the manufacturers of resin kits. In this kit, the floor is made from a frame casting with an interior casting glued over it. You can see how the interior overhangs the frame. This will need to be sanded off. This is an inconvenience, but not really a reason to pass on buying the kit. You can not see the inside and underframe on the car at the same time and will never notice the slight mismatch.

Jim and I glued a piece of 220 grit wet/dry sandpaper to a piece of 1/2" particle board. We used spray adhesive to hold the sandpaper in place. To sand the parts, rub the part on the sandpaper. We clamped the piece of wood to the work bench to free up one hand. It will be hard to slide the part around on the sandpaper until the sandpaper clogs up a little. Be careful because the parts are soft, and they will sand anywhere you put pressure. That means they will sand thinner where your fingers are. I used a hard dry sponge to grip the gondola side and it helped. It gave me better pressure over a larger area. I didn't want to use anything hard because it could ruin some of the detail on the kit. As you are sanding, keep looking at the part to make sure that you are sanding evenly. If the part is not sanding evenly, you need to put pressure on the high spots. Once you sand back to the design thickness of the part, the flash will fall off.

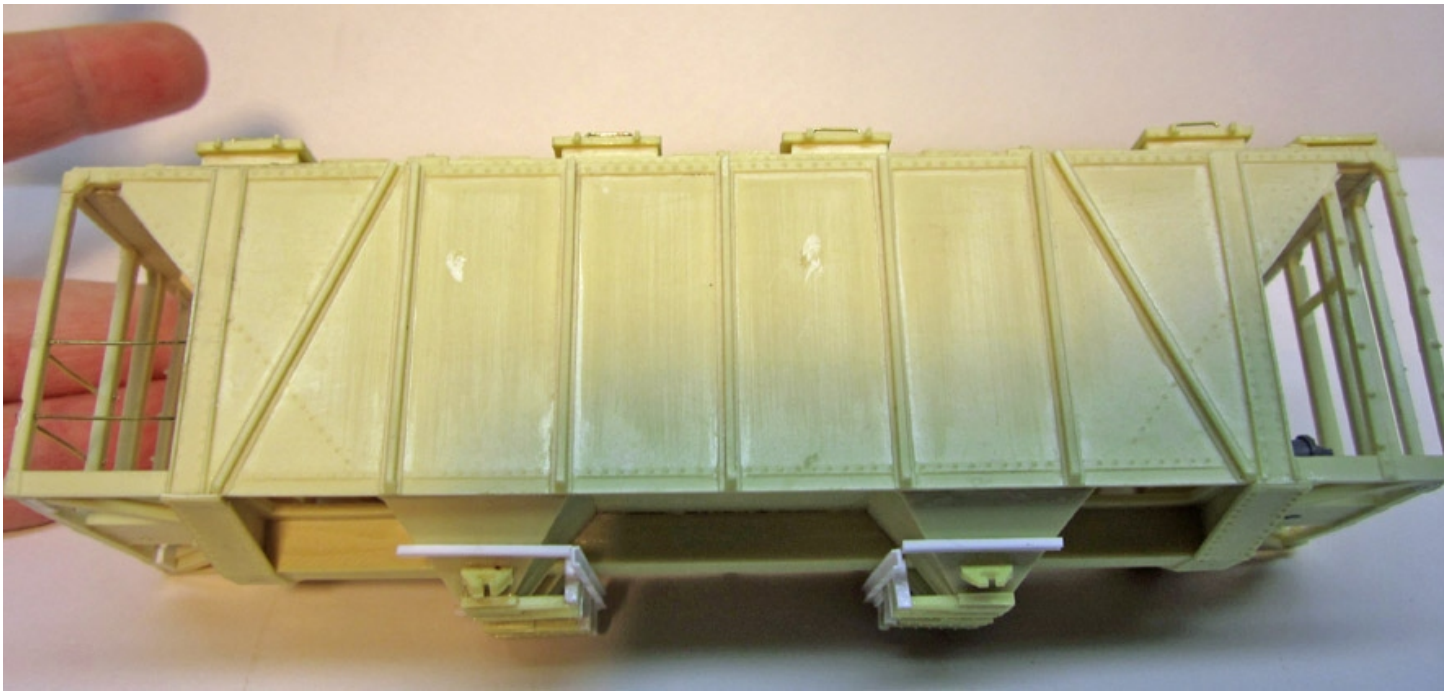




This is the gondola model I was building while Jim was working on his kit. I borrowed the kit from Matt to photograph for the article. It looked like it would be fun to build, so I did.

When I built the gondola, I glued the frame and inner floor together first. I clamped them to a flat surface when I glued them and I believe it made for a flatter floor. The inner floor was a bit larger than the frame due to shrinkage during manufacturing. This is more of an inconvenience than anything else. When the model is built, you will not be able to see the inside and the underside at the same time, therefore, the mismatch will not be noticeable. I sanded the sides and ends of the frame assembly using our sanding pad free hand. In retrospect, I think it would have worked better if I used a block of wood to keep the side square to the sandpaper. Go slow here. Check the width by holding the sides to the frame and see how the end fits. Remember that the end should overhang the side by a little, but not a lot.

Jim is working on this covered hopper car kit.



Jim decided that his hopper car needed a little more detail. You can see the white styrene parts he has added. One of the nice things about working with resin kits is that you can add details and they are easy to glue on. The resin material is compatible with many glues and other materials.

Measure the width to see that the sides of the frame are parallel. Then, check the ends of the frame to see that they are square to the sides. Sand the ends of the frame until it is the same length as the sides. Next, check the sides to see that they are square on the ends. When you have the fit right, you can glue a side on. Keep it square to the floor. I tacked it at the bolsters first, then in the middle. This allowed me to straighten out any kinks in the frame as I went. When it was all tacked in place, I ran a bead of ACC along the joint with a toothpick. Do the other side next. When putting the ends on, I wrapped a rubber band around the car at the floor line. This allowed me to use both hands to align the end. I used the lower corner for reference. Adjust the end so the overhang is the same on both sides, and put a drop of ACC at the lower corner with a toothpick. Do the same on the other side. Next, I adjusted the top corners so the overhang on the end was the same from the bottom to the top. Put a drop of ACC at the top corner, and then run a bead along the whole joint. I did the same on the other end. At this point, it was just a matter of adding the other details.

Jim is starting to add the railings to his hopper.

Resin kits can add some variety to your car fleet, in addition to, adding cars that may not otherwise be available. They have some issues that are unique to the manufacturing process and materials, but these issues are not a detriment to the kits. You just need to understand some of the issues and what you can do with them. They are good models when finished; and the manufacturing is getting better all the time. If you have not built one, I would recommend taking a look to see what is available. Take your time on the first one, being sure to think ahead so you know how parts are to be assembled. Not only will you be having some fun building it, you will have a different car for your layout. Lastly, have a friend over and build some models together. It's a great way to spend the day!

Layout Design

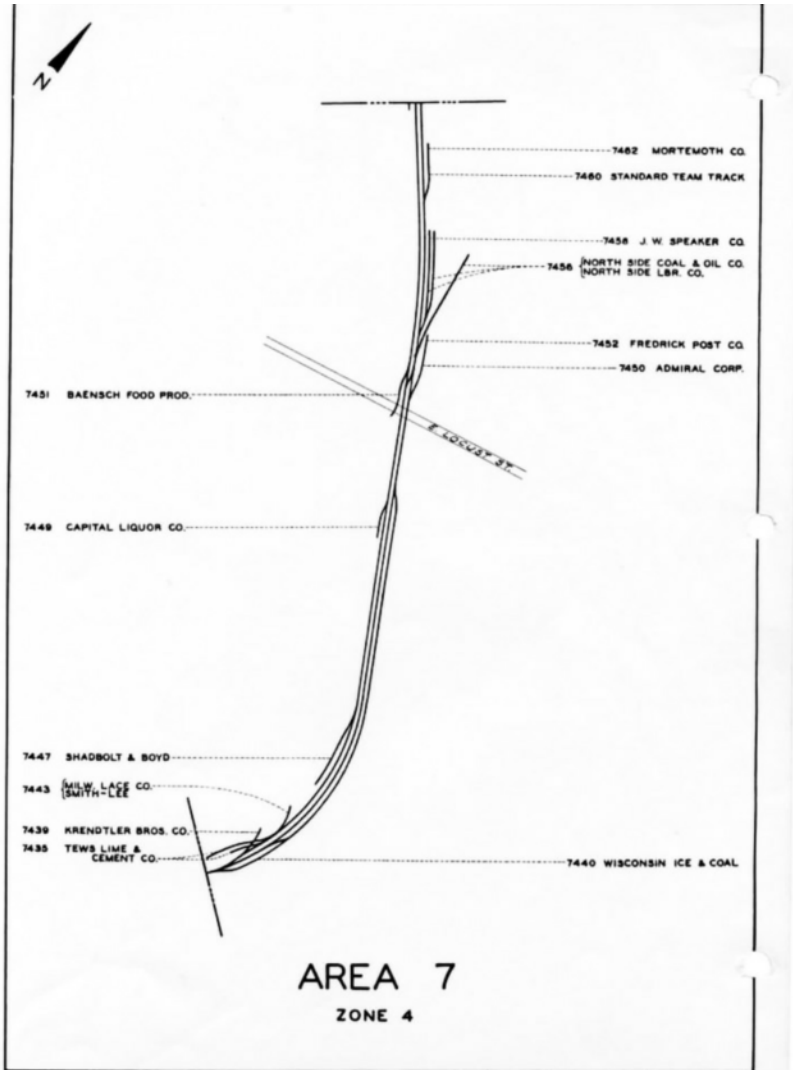
By Glenn Guerra

One day not long ago, Matt Gaudynski had a bunch of us over to see the layout he is building. He was explaining to us what he was doing and why he was doing it. As we were listening to how he went from concept to bench work, I was thinking it would make a good article. Building and running your layout can be a lot of fun, but it takes some planning to make sure it works the way you want. Let's take a look at what Matt is doing.

Model railroading is a process to create an illusion of something in miniature. That miniature can be a locomotive, a car, a building, or a layout. The layout can be an illusion of a region, a location, a railroad company, a time in history, or any number of other things and combination of things. I use the term illusion because I think it fits best when describing what we are doing. As an example, we try to adhere to prototype dimensions, but being exact in those dimensions may not be possible. A rivet would be a good example. If we make the model rivet exactly the scale size, it may not be noticeable on our models. We can see it on the prototype and our eye expects to see it on the model. As part of our illusion, we may make the model rivet slightly larger so we can see it. In planning our layouts, we need to make many compromises like this to accomplish our illusion. Think of distance for a minute. A scale mile in S Scale is 82.5 feet. How would you fit 10 miles of railroad in exact miniature in your space? Matt thought through a lot of these things when planning his layout.

This is Matt's plan for his layout. With careful planning, he was able to fit all the prototype industries in a 3 mile segment of the "beer line" into his layout.

Matt has some roots in Milwaukee, Wisconsin and decided he wanted to model part of the railroading in Milwaukee. He chose the "beer line" as an area he wanted to model. Milwaukee Road fans, and people familiar with Milwaukee, know what the "beer line" is, but let me give the rest of you some background. Milwaukee, Wisconsin sits on a bluff by Lake Michigan. The Milwaukee River, Menominee River, and the Kinnickinnic River all come together to form the port of Milwaukee. When they started building railroads out of Milwaukee, the desire was to get into the interior of Wisconsin and to get to the Mississippi River.



Matt was able to get this copy of the Milwaukee Road track and industry list for the area he was modeling. Historical societies can be a big help when looking for information like this.

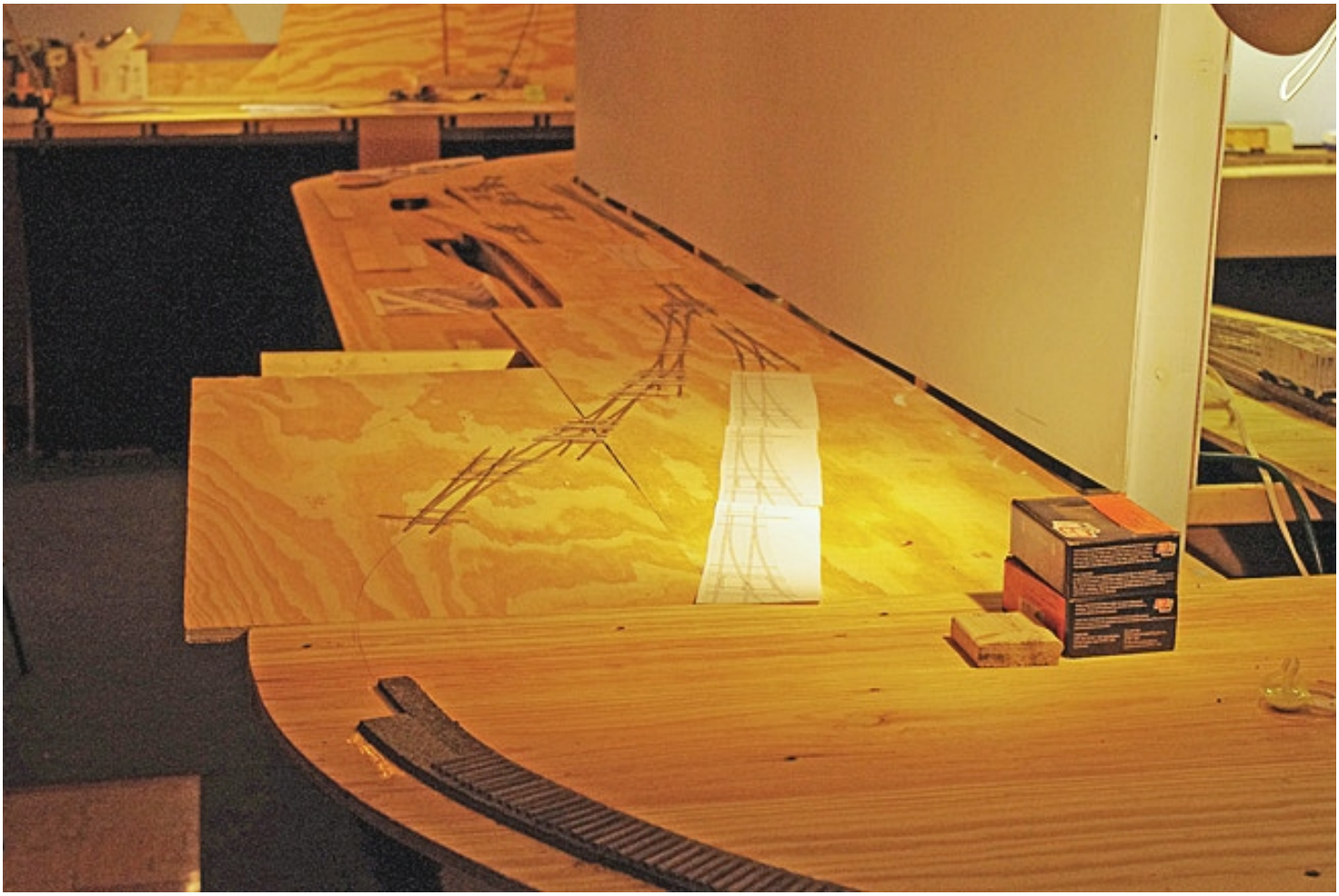
To get out of the low land by the confluence of the rivers, the railroads had to climb a grade. The simplest way to do this at the time was to follow the rivers. The first railroad out of Milwaukee was the Milwaukee and Mississippi Railroad. This railroad followed the Menominee River west to Waukesha, Wisconsin and eventually to Prairie du Chien, Wisconsin on the Mississippi River. The second railroad out of Milwaukee followed the Milwaukee River and eventually made it to La Crosse, Wisconsin on the Mississippi River. All of this eventually became the Chicago Milwaukee and St. Paul Railroad, or the Milwaukee Road, as it is commonly known. Throughout all of this, industry was growing in Milwaukee and especially on the railroads. The valley of the Menominee River became one of the big industrial centers of Milwaukee because it offered direct access to deep water shipping and there were large expanses of flat ground for railroad yards. The traffic patterns changed; the route to La Crosse and then to Minneapolis became the main line. Since the Milwaukee and Mississippi Railroad and the Milwaukee and La Crosse Railroad did not connect in Milwaukee, a connector track was built from the rail yards in the Menominee valley north to connect with the line to La Crosse. This meant that the line following the Milwaukee River was no longer a main line from the junction to downtown Milwaukee. However, this line had a lot of industry on it. One of the largest industries on this line was beer. Schlitz and Pabst both had large facilities on the line. This was now a six mile long industrial spur, and because of the breweries, it became known as the “beer line”. Matt had some idea of a railroad that he could model, but there were other considerations.

Matt also likes operation. He belongs to a round robin group which operates on each other’s layouts. They are not all in the same modeling scale, but the operation binds them all together. Matt wanted operation on his railroad, and with it, the ability to have people over for operating sessions. This meant that he would need to have the ability to run five or six trains at a time. If he modeled a division on a railroad ,he would need a lot of space to separate the towns and provide room for the trains to switch the towns. If he modeled the “beer line”, he could have five or six switch engines moving all the time since there were enough sidings and locations on the line.

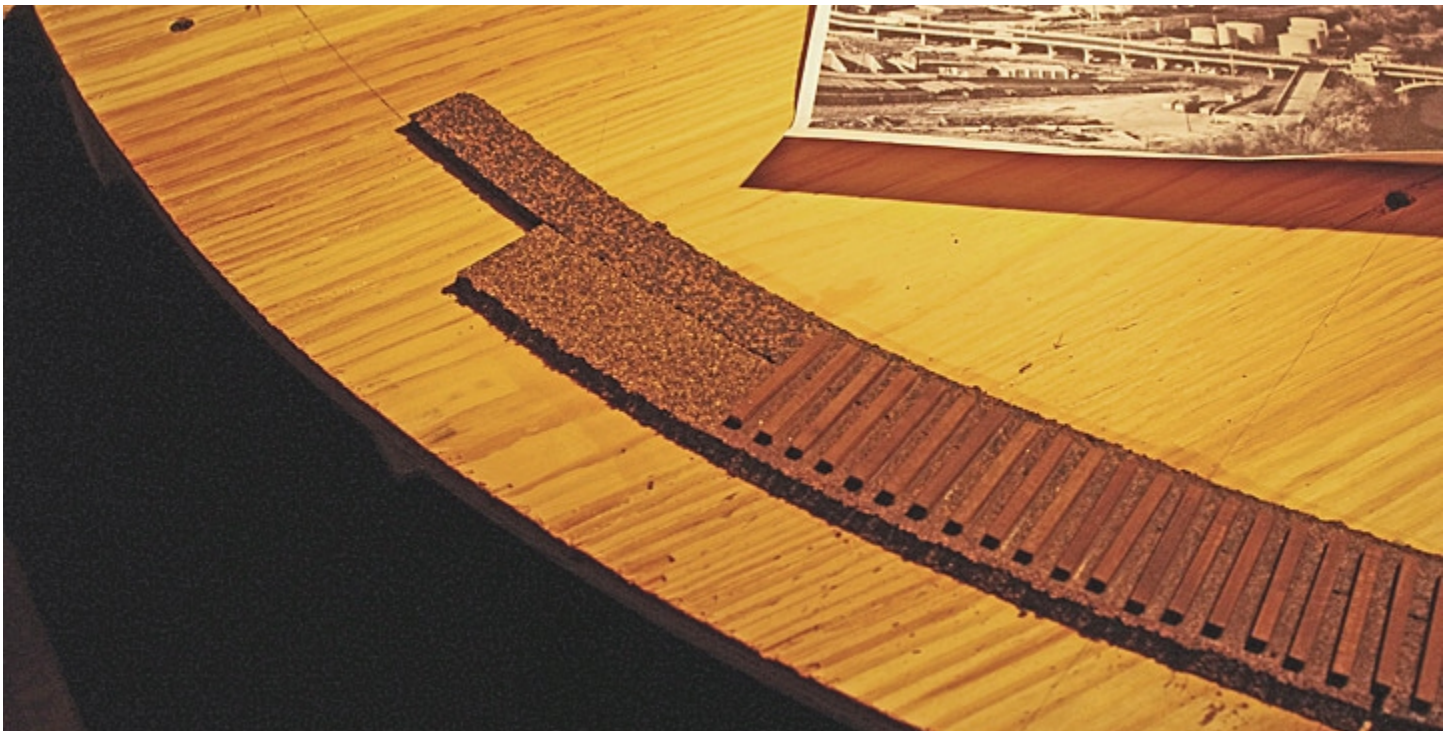
Matt used a history book about the "beer line", as well as, aerial photos for reference while designing the layout. He keeps this material handy when building. As good as scale plans are, you still need to make some changes as you go.

At this point, Matt had a railroad and location he wanted to model. Now it was time to think about how to create the illusion. One of the first considerations was the model scale. S Scale was chosen because it gave some size, and would fit his space. Since he was modeling an urban scene, the larger S Scale buildings would make nice view blocks and take the place of mountains or hills on other layouts. There was more thought though, six miles of railroad would be 495 feet of track in S Scale. Some compromises would need to be made. Just like selective compression creates the illusion when making a model building, it can also work when designing your layout. To create the selective compression illusion on the layout, Matt started to gather photos and other information about the line. Historical societies are a good source for information and there are also online resources available. Matt found many aerial photos online of the "beer line", and they were a big help. In this case, there have been some good books written about the "beer line" and that was a good start. Matt was telling me that he started to study how the industries changed over time, and this influenced the sidings they had, as well as, when certain parts of the building complexes were built. Through an online source, he was able to get copies of company track charts showing where the industries were and what they were. This lead to a list of key industries that would need to be on the line. Now, it was time to look at the space where the layout would be built.

This part of the layout is operable, and Matt is starting to mock up the scenery. They operate this section now to have some fun and check the track for any problems.



Matt built all the switches for the layout before starting construction. He said that this allows him to move ahead with construction at a good pace. Small adjustments need to be made as he goes, but having the switches ready made has been a big help.



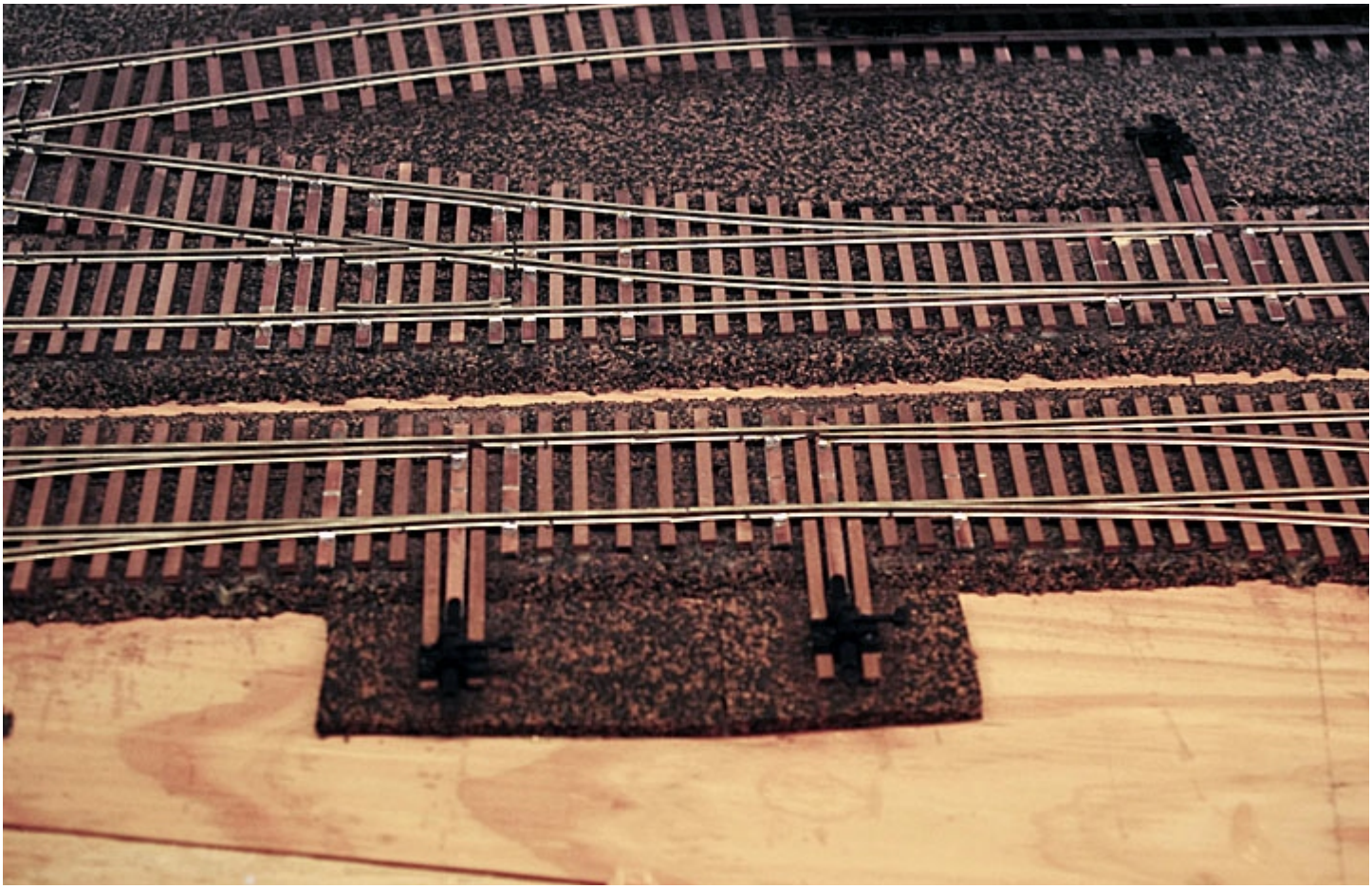
Matt is using O Scale and HO Scale cork road bed together. One side is O Scale and the other is HO Scale. This combination works just right for S Scale.

This view is looking at the location of the Schlitz Beer complex. At that location, the tracks varied in elevation and Matt has incorporated that into his layout. These small variations in height will add a lot of interest to this scene.

To design your layout for operation you need to have locations for cars to move to and from. In the illusion that is our layout, one of those locations is almost always not on the layout. There just is not enough room. The common way to handle this is to have staging yards. Staging yards are a place for cars on your layout to come from and leave to, but are not part of the main scene. The staging yard gives the illusion of great distance. Think about it in these terms – a young Matt was sitting in Milwaukee watching a switch engine spot cars. Where these cars came from or where they are going is not known and does not matter to Matt. He is enjoying watching the conductor and engineer work to get the cars spotted. This is the illusion Matt wants to create on his layout. He wants to be that train crew spotting those cars. Once they leave his line of vision, they are no longer part of his interest in the scene. This is what a staging yard does when planning operation on your layout. The staging yard also frees up a considerable amount of available space that can be used for primary views.

By now, Matt had some idea of the views he wanted on his layout, and knew that he would need some staging area. In this case, the "beer line" is a dead end with only one way out to the rest of the world. This meant that Matt could get by with one staging yard location. This also meant that the layout would be a point to point layout. Now to take the available space and wind some bench work into it. There are many ways to compress a scene like the "beer line" to fit a layout. You can eliminate some of the sidings and model the main industries; or you can compress all of it a little. Matt decided to compress all of it a little, and keep all the customers on the line. This worked best for operation because it provided all the places to switch cars into. To make it all fit, he made the sidings and yards shorter, but kept them all. Now it was time to get some plans on paper that could be used in building the layout.

Matt started drawing scale plans next. He decided on #5 and #4 switches because they would take less space. This is workable since all the engines are switch engines and the cars are all 40' or less. While he was fitting the track to the space available, he was also thinking about the locations of the industries. Since the "beer line" ran along the river, most of the industries were on one side of the track, and this made locating them behind the track on the layout possible. The contour of the line was also considered. The land slopes up away from the river, and not all the tracks are on the same level. This was incorporated into the layout design as well.



Matt is using N Scale switch throws for his turnouts. Notice the irregular tie spacing on the siding at the top of the photo. Since Matt is hand laying his track, he decided to vary the spacing like the prototype railroads did.

Once the track plan was done, it was time to start work on the layout. Matt decided that he wanted to hand lay all the track. Since he was doing his track this way, he is going all out varying the spacing on the ties so they are spaced farther apart on the siding than the main line. All the switches were built ahead of time so they would be ready when the bench work started. Matt uses a fixture for filing the switch points and assembling them. He said he worked on them while watching TV. The bench work is cookie cutter plywood which makes doing the elevation changes simple. Cork roadbed was used, and I like the way he is doing it. Matt noticed that the O Scale and HO scale cork road bed were the same thickness. By using the O Scale on one side and HO scale on the other, the spacing works out perfect for S Scale. You just need to remember that the center of the track is not the center of the two pieces of cork anymore.

The planning and prep work took a while, but it is paying off now that construction has started. Matt said that each chance he gets to work on the layout he can make some progress because the switches are made and the plans are there. What you see in the photos is the present state of the layout. Matt said that they will start operating the railroad so they can check the track and fix any problems. For starters, they will use car cards, but ultimately, computer generated switch lists will be used. Some of the buildings are mocked up using foam board to see how they will look. For control, Matt uses NCE DCC. The switches are all hand thrown using N Scale turnout throws. Ties are basswood and glued to the cork with carpenters glue. They are sanded level and painted with thin acrylic paints for staining. So, like most projects, the time spent up front on planning is paying off. Looks like Matt will have a nice layout in the not so distant future.

The Choctaw Rocket
In S Scale

Jim's model of Rock Island E6a #630 pulls the "Choctaw Rocket out of a short cut and over a grade crossing on Chuck West's Des Plaines Valley model railroad layout. The E6 is an Overland Models brass import custom painted and lettered for the Chicago Rock Island & Pacific.

By Jim Kindraka

Passenger trains have always been a great modeling interest of mine. I think all of us enjoy seeing a sleek "Limited" slide by on the railroad. The challenge has always been, "then what do you do?" Passenger stations and coach yards take up a lot of space. As much as we might want to have that twelve car *Twentieth Century* or *Broadway Limited* or *Southern Crescent* or *Lark* or *City of Los Angeles;* the modeling and layout challenges can seem overwhelming.

Over the last several years, one of the national modeling magazines has run articles on more "pike-size" passenger trains. These are named trains that existed on the prototype in the streamline era; running daily and comprising of generally three or four cars. I was drawn to those articles because here were trains that could fit my model railroad, yet satisfy my sense of prototype history and provide interesting and challenging modeling projects. The articles highlighted passenger trains like C&EI's *Meadowlark*, a lunch counter lounge car with three 60-seat coaches; a couple of four car Central of Georgia trains, *Man o' War* and the *Nancy Hanks II*; and the Great Northern train *Red River*, a four car consist with a cafe observation car named "Red River". Other railroads and named trains included: Missouri Pacific's *Delta Eagle*, Chicago Northwestern's *Minnesota 400* and Alton's *Ann Rutledge;* none were more than four cars in length in the streamline and post-War era.

The Choctaw Rocket was originally pulled by an EMD 1200 hp TA which was not enough power. It was soon pulled by an EMD 2000 hp E6 or an Alco 2000 hp DL-109. Jim's train is pulled by this EMD E6.

I've always had a soft spot for the Chicago, Rock Island & Pacific. I'm not exactly sure why, maybe its large mix of paint schemes, colors and equipment, or the railroad's general down trodden "underdog" character. In the listings of pike-size passenger trains highlighted in the earlier mentioned articles, one that particularly stood out was a CRI&P train: *The Choctaw Rocket*. The prototype version ran from Memphis, Tennessee to Amarillo, Texas. Its inaugural run was November 17, 1940.

RPO-Baggage car #702 follows the locomotive on the "Choctaw Rocket". This is a Southwind Models import modified to match the Rock Island's converted two-window RPO cars. Jim painted and lettered the car with decals he made.

The 68-seat coach "Amarillo". The model uses an American Models full length passenger car as a core, correct Pullman Plan 7436 sides from Union Station Products and decals made by the author. Bob Hogan built, painted and lettered the car.

The first thing I realized was that in order to model the train, I needed to understand a lot more about it. I contacted a fellow S scale modeler in the Rock Island Technical Society (RITS), and he put me in contact with a gentleman in Stuttgart, Arkansas. This all took place in the 1980's so communication was by letter and photocopy. When Jim Bennett's first letter arrived in an envelope commemorating the 40th anniversary of the *Choctaw Rocket*, I knew I was on the right track! We began a long exchange; he provided me with photos and all sorts of other helpful information about the train and all its history, including newspaper accounts of its inaugural run. The *Choctaw Rocket* was always a streamliner; in fact, it was the first streamline train consist to serve Memphis and the State of Arkansas. A typical post-War consist was, you guessed it – four cars.

The 8-section, 5 double bedroom sleeper "Wewoka" slides by on Jim's "Choctaw Rocket" train. The model used an American Models full length passenger car as a core, Pullman Plan 4095 sides from Union Station Products and decals made by the author. Bob Hogan built, painted and lettered the car.

The dining-parlor observation car "Memphis" carries the tail sign on Jim's "Choctaw Rocket". Jim modified the windows on an American Model observation car and added the corrugations.

The cars were always the same, there were identical sets for the east and west bound trains. They provided service between Memphis, Little Rock, McAlester, Oklahoma City and Amarillo. The *Choctaw Rocket* also connected to a train specifically for Hot Springs and the National Park there. Mr. Bennett also helped me with some additional history.

The Rock Island would sometimes add one of their 200-series chair cars to the consist when demand warranted extra seats. Bob Hogan built "Owatonna" using Pullman Plan 7404 sides from Union Station. The author made the decals. The trucks are 43-R triple bolster trucks imported by River Raisin Models. They are correct for this car, and were used on several other P-S cars built before 1940.

Thanks for taking a ride on the inaugural trip of the S Scale "Choctaw Rocket".

When I tell someone I'm modeling a Rock Island train from Memphis, I usually get a quizzical look, "Memphis?" yes, Memphis. That southern city was one of the CRI&P eastern terminus locations. The *Choctaw Rocket* followed a route that was originally laid out at the turn of the 20th century by the Choctaw, Oklahoma and Gulf railroad. The line was simply known as "The Choctaw Route". The railroad itself was purchased and completely absorbed by the Rock Island in 1902.

The train itself was led by a single diesel unit. In keeping with what seems to be a Rock Island tradition of mixing motive power, photos and railroad records indicate the *Choctaw Rocket* was pulled at one time or another by a 1200 hp EMD 'TA' diesel or one of the Rock Island E6 or DL109 units. The basic consist, however, remained the same from its inception until the early 1950's. That was a modernized heavyweight RPO-baggage, CRI&P #702 or 703; the coaches "Amarillo" or "Oklahoma City"; 8 section-5 double bedroom sleepers "Seminole' or "Wewoka" and either of the dining-parlor observation cars "Memphis" or "Little Rock". Except for the RPO-baggage, the cars were all Pullman Standard lightweight cars built especially for the train in 1940.

A glimpse of some interior detail on Jim's Choctaw Rocket observation car "Memphis".

The Rock Island would sometimes add one of their 200-series chair cars to the consist when demand warranted extra seats. These chair cars were also built by Pullman-Standard, their Plan 7404. The cars were ordered by the Rock Island in May, 1937 and had 43-R triple bolster trucks and standard vestibule steps which were not retractable, both features to remember when modeling.

The Models

Accurately modeling specific passenger trains in S scale can be a challenge, but not an insurmountable one. To start with, Overland Models imported brass EMD E3 and E6 units many years ago. The EMD TA and Alco DL109 models are not yet made in S scale, so the decision on motive power was solved. I chose an E6a unit and worked with a painter friend in Lansing, Michigan, to paint the model in the original scheme. The painter custom made the necessary decals.

Reviewing prototype photos of the Rock Island's two 700-series RPO cars showed the previously imported Southwind Models Harriman RPO to be reasonably close. I worked to block out two of the model's windows to create the correct two-window RPO needed for these cars on the Rock Island. Otherwise, the models were very close in all other dimensions and details as built.

-10-41

(COPY)

SKETCH 2249-1
(2 SHEETS) SHEET 2
FILE-1326
JNB- 10/83

ROCK ISLAND LINES
Mechanical Department

RESTORATION C. SHEET BY - JIM BENNETT - STUTTGART, ARK. 10/83 — SHEET #2

ROCKET TRAINS - CONSIST

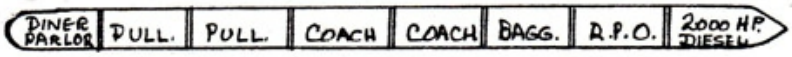
Trains No. 51 & 52 (2 Trains)
MEMPHIS - AMARILLO

"CHOCTAW ROCKET"

Diesel Locomotive (1200 H.P.)	606 - 621	602 - 622
Baggage-Mail	702	703
Chair	*350 Amarillo	*351 Okla.City
Pullman	Wewoka	Seminole {8 Sections, 5 Dbl.bedrooms
Diner-Parlor	431 Little Rock	430 Memphis

*Note: Double Vestibule

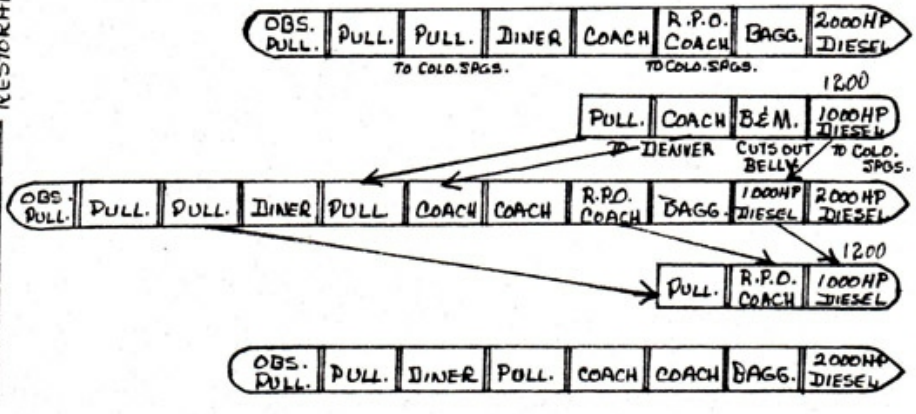
Trains No. 61 & 62 ZEPHYR ROCKET (2 Trains)
ST. LOUIS - TWIN CITIES



Diesel Locomotive (2000 H.P.)	627 - R.I.	-Q
R.P.O.	501 -R.I.	500 -R.I.
Baggage	861 -R.I.	901 -Q
Coach	Jonquil...320 -R.I.	Waterloo 312 -R.I.
Coach	4709 -Q	4702 -Q
Pullman	Cedar Rapids	Minneapolis
Pullman	Rocket Tower	Zephyr Tower
Diner-Parlor	St. Louis...432 -R.I.	(St.Paul 433 - R.I.

Trains No. 7-8, 107-108 (2 Trains)
ROCKY MOUNTAIN ROCKET - CHICAGO & KANSAS CITY TO DENVER AND COLORADO SPRINGS

630 Relief Eng. out of Chicago



Chicago - Belleville	7 & 8	
Kans.City - Belleville	107 & 108	
Belleville - Limon	7 & 8	
Limon - Colo Springs	7 & 8	
Limon - Denver	7 & 8	

Diesel Locomotive (2000 H.P.)	(750 628)	(751 629)	Chicago - Denver
Diesel Locomotive (1000 H.P.)	750 (603 or 602)	751	Kans City - Colo Springs
Baggage-Mail	700	701	Kans City - Belleville
Baggage	850	851	Chicago-Denver
R.P.O. Coach	Pikes Peak...376	Mesa Verde 375	Chicago - Colo Springs
Coach	Bear Lake...309	Longs Peak 310	Chicago - Denver
Coach	James Peak...311	Dream Lake 308	Kans City - Denver
Pullman	Thompson Canyon	Forest Canyon	Kansas City - Denver
Diner	Mt. Evans...420	Centennial 421	Chicago - Denver
Pullman	Garden of the Gods	Grand Mesa	Chicago - Colo Springs
Pullman	Lawn Lake	Odessa Lake	Chicago - Denver
Observation-Pullman	Thunder Mt.	Phantom Valley	Chicago - Denver

On the previous page, is a copy of the Rock Island Lines consist of passenger trains that Jim Bennett was able to send to Jim Kindraka. The document has been updated, and showed Jim Kindraka what cars were used on the train he wanted to model. The above photo from the Jim Bennett collection is of the Seminole after it was taken out of service. The Seminole was one of the cars that ran on the Choctaw Rocket, and Jim used the photo to help make his model of the Wewoka.

The passenger cars themselves came together over several years. Using research materials from the Rock Island Technical Society and the Pullman-Standard Library, at the Illinois Railway Museum, I was able to get accurate drawings and photos of the three other cars.

Things really did not get moving until American Models built their full length streamline cars back in the late 1980's. These cars became a core kit for scratch building sides with the correct fluting and window patterns. The first car I actually completed was the dining-parlor observation car "Memphis". I used Evergreen corrugated roofing to make the corrugations for the sides, blocked the necessary windows with styrene and added windows where appropriate. The tail section has some interior detail, and the car carries a lighted *"Choctaw Rocket"* tail sign which at one time was made in S scale by Tomar.

The sleeper and coach would require completely new sides to be scratch built; however, about five years ago, a company named Union Station Products entered S scale with a vast array of correct styrene overlay passenger car sides. I was able to order the correct CRI&P coach and sleeper sides by Pullman Plan number from Union Station. Those kits also came with roof overlay material. Again, the American Models cars were used as a core kit, and Bob Hogan built the two cars. All the cars were lettered with decals I made. Additionally, I had Bob build one of the Rock Island's 200-series chair cars, again using the AM core and Union Station sides. These cars were added to the *Choctaw Rocket* when the passenger load swelled beyond the four car train's capacity.

It has taken many years for me to complete my pike-size passenger train, but it is an accurate representation of the original, and satisfies that desire for a streamliner to glide by. With the resources now available to S scale modelers, there is no reason for us all not to have a pike-size streamliner!

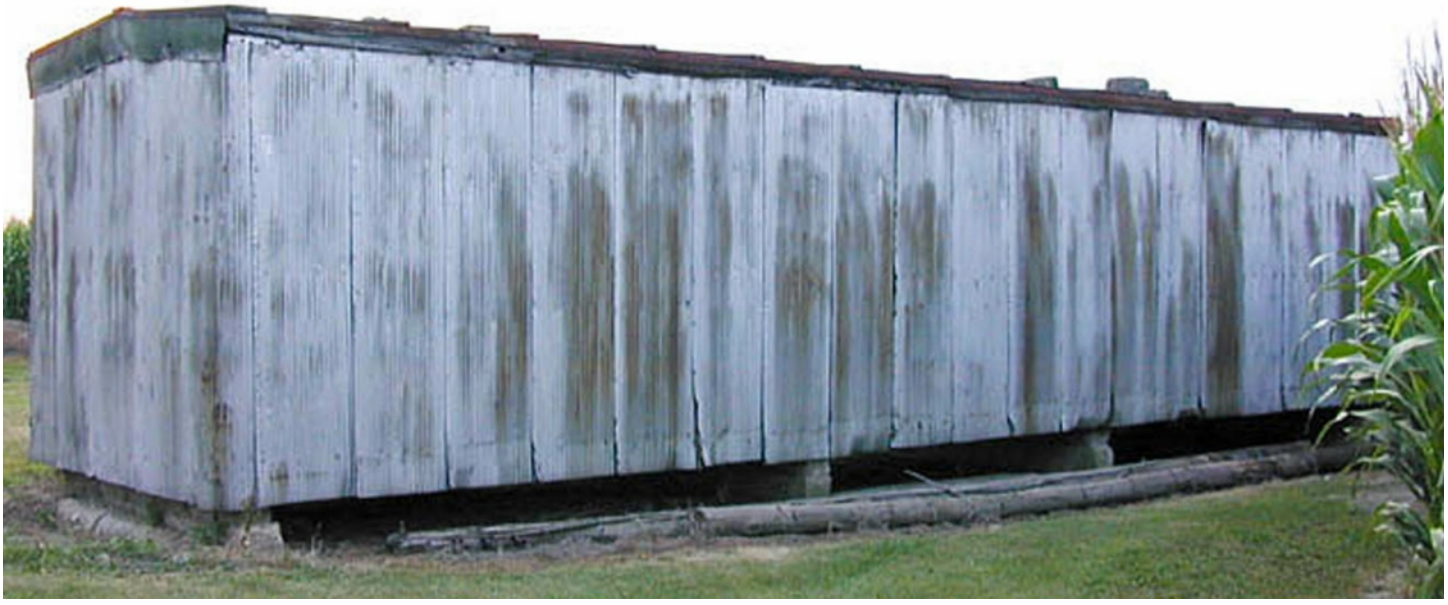
Box Car Out Buildings

These two 50' steel boxcars were on the old Chicago and Alton in Illinois. Note that the boxcar door has a small door added to it for access to the interior. These two cars are still sitting on their trucks, but the track is not connected anymore.

By Glenn Guerra

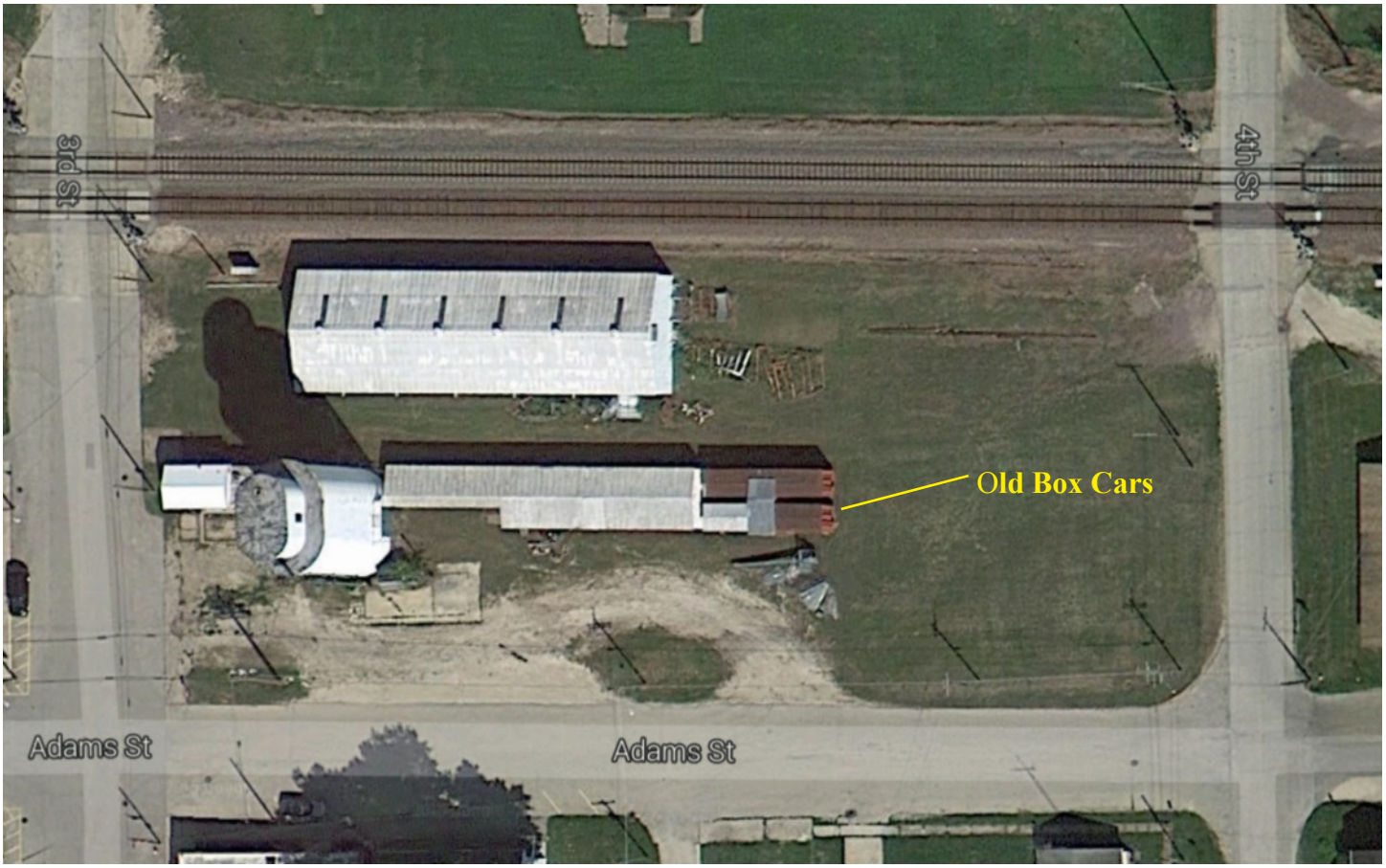
Old boxcars make good storage sheds. They have been used by the railroads themselves, and have been sold to private owners. Some railroads had a policy of selling old car bodies, and they appear common in some parts of the country as out buildings around farms and feed stores. The SOO Line Railroad was one of those railroads. For a while, you could go to any SOO line depot agent and buy an old car body. Many SOO Line passenger car bodies were sold in Wisconsin, and became cottages in the woods. Today, some of these cars are in museums. Boxcars were commonly used as storage buildings; much like modern day shipping containers are used today. When I travel, I am always looking to see if there are some old boxcars around farms. In some cases, they can be used for measurements of cars that do not exist anymore. They can also add some interest on our layouts. Do you have an old box car or kit that does not fit your era or the details are not up to today's standards? Make a storage building out of it, and put it on the layout. Take the grab irons and other details off. Mount it on some ties or pilings. Put some small doors in it, then paint it, and you have added some interest to your scene.

This car is on the old Chicago and Alton just south of Jacksonville, Illinois. Today this line is owned by the Kansas City Southern. The railroad runs just behind the car.



These three views are of Chicago and Eastern Illinois car #2453 on a farm in central Illinois. The photo to the right is the center sills under the car. When looking at old cars, you can sometimes find the car number on the center sill or inside the car above the door if you can get in the car.

These two cars are located at a feed dealer in Malta, Illinois. I photographed them in the 1990's, and just looked at the current satellite photos of Malta. The town of Malta is located on the old Chicago and North Western, and is the first town west of DeKalb Illinois. They are still there. I like the steel barrels filled with concrete for a foundation. How hard would this be to do on your layout? On the next page is the current satellite view of Malta. You can see the two cars as what appears to be an extension of one of the buildings. This would give you an idea of how this may look on your layout. If you are modeling an older era, you may want to put a siding in for the feed dealer. If you are modeling the contemporary era with no siding, the old car bodies would still be appropriate. I am not sure of the lineage of these cars. There are some similar cars on a farm west of Aurora, Illinois that are also on barrels.



This is the current satellite view of Malta, Illinois showing that the two boxcars are still there.

These two cars are on Route 47, just north of Route 24, west of Aurora, Illinois. I took this photo in the early 1990's. The cars are still there, but are in poor condition. The farm they are on is still active, but the homestead is no longer being kept up. Note the barrels for a foundation. These are the same type of car that are in Malta, Illinois, and are mounted the same way. It makes you wonder if the same mover installed both sets.

This old car was in Argyle, Wisconsin on the old Illinois Central line from Freeport, Illinois to Dodgeville, Wisconsin. The railroad ran just behind the boxcar. I took this photo in the 1990's also. In the current satellite view, the car is gone. The building with the windows is still there. Look for railroad street in Argyle and you will see the feed dealer and the old right of way.

This car is near Fond du Lac, Wisconsin. I have known about this car since 2000 when I moved to Wisconsin. It, and the home next to I,t were rather run down and you could hardly see the car in the brush. New owners bought the place and fixed up the house and boxcar. They use it for storage. Just behind the box car and parallel to it, is the right of way for the old Chicago and North Western line that ran from Fond Du Lac to Sheboygan, Wisconsin.

These two cars are located west and north of Fond Du Lac, Wisconsin. They are still there today, but have been repainted and resided to be billboards. I was never in them and do not know the numbers, but I suspect they are old SOO Line cars. The SOO Line had shops in Fond Du Lac, and this is only a few miles from there. These are on Ridge Road, and there were quite a few old boxcars at farms along this road. Most of them are gone now. Note the ventilators on the roofs of the cars. Details like this can be added to your model.

Sometimes you need to look close. This old boxcar is on a farm north and west of fond Du Lac, Wisconsin. It has been covered with a steel roof to make it more water tight.

This photo, and the next two, were taken in Suisun City, California on the old Southern Pacific main line to Oakland, California. Look how many old cars are in this building. These were used by the railroad maintenance of way department. This complex is still in use today.

These two old cars are located next to the Escanaba and Lake Superior Railroad roundhouse in Escanaba, Michigan. They were used for storage for many years, and are starting to fall apart. A similar set of cars could be used by your roundhouse. Many times old boxcars were used for tool houses and oil houses around engine terminals.

These two cars were in southeast Kansas. I was driving west on route 166 from Missouri. It seemed like every farm had at least one old boxcar. Some had as many as five. These two were next to the road in fields, so I stopped to take a photo of them. I am not sure of the railroad, but the Missouri Kansas Texas was big in this part of Kansas, and they had a big shop in Coffeyville, Kansas a few miles west.

Getting Lucky

By Jim Kindraka

Oops! Generally followed by a thump or crunch sound...

It has happened to all of us, an inadvertent move or slight case of fumble fingers, and a model falls down or maybe it's a case of a heavier tool falling on a model. One of Murphy's Laws is that an object will always fall where it can do the most damage – it's a corollary to the rule that a dropped piece of bread will always land jelly side down on the new carpet! If you are lucky, something might break its fall. If you are not, you may just have made a kit out of a solid object...

I've often thought that one advantage to brass is that it will dent rather than shatter like plastic when it hits the floor. But even that doesn't always hold true. On the other hand, it is possible that chance smiles on you, and the damage is either easy to repair or, in a few cases, actually provides an "enhancement".

Such was a discovery a few months ago... Many years ago at a local train meet, I heard that dreaded "oops" from another person and saw hands frantically trying to catch a model. The hands broke a bit of its fall, but there was a very audible "clunk" as my brass ACF covered hopper hit the floor. The person who knocked it down felt awful. So did I, but I tried to be philosophical. They were a friend, and it did not happen on purpose.

They handed me the car with the truck in pieces and obvious damage on one end. I couldn't really bring myself to look, so I just wrapped my brass car up, put it back in the box, wrote "damaged" on the box and away it went. Life goes on and they are only toy trains...

Fast forward to last fall when I was working on repainting and converting the Lionel ACF cylindrical covered hoppers to a more scale-like model (S Scale Resource, December-January Issue; Page 24). When repainting those cars, I put them in a warm oven (180° F. Maximum) just to "fix" the paint and speed drying. I pulled a car out of the oven and inadvertently grabbed it by the bolster – forgetting that while the car is plastic, the bolster is metal and gets hotter! Down it went and broke in several pieces. I was determined to salvage the model, so I began slowly and carefully gluing it back together. That operation was ultimately successful; and it started me thinking about the long stored brass covered hopper marked "damaged".

On first look, the broken truck could be repaired with new springs, a new bolster screw, straightening and re-gauging wheel sets. With the repaired truck, the car tracked fine in a train, so the model's frame didn't appear to be bent. Since there was definite damage to one end, I decided to take it to the Des Plaines Valley group and get some pointers on straightening the brass. When I told the story and set it on the rails there, the response was a quick, "why do you want to fix this? Real trains get bent up too." As we looked at it more, those of us present realized that if we set about trying to create a bent car end to simulate an incident on the railroad, we probably couldn't do as convincing a job. Like the article's title says, sometimes you get really lucky!

Hopefully, it won't happen to you, but if it does, when one of those incidents strikes, take some time to collect yourself. Then take a long look at what has happened with an eye toward the prototype. They have their "oops" events too. It might be that you too can turn a lemon into some lemonade!

The S Scale Resource Classified Listings

Manufacturers

Dealers

Pre Owned

To advertise in *The S Scale Resource* classified listings contact us for our rates. Your classified ad will appear in the section you want for 6 issues. If you do not see a section that you think would fit your products or services let us know. We can add a category that better suits you. Your ad is hot linked to your web site which puts your customers one click away from you.

A Baldwin switcher still running at an elevator east of Montpelier, Ohio