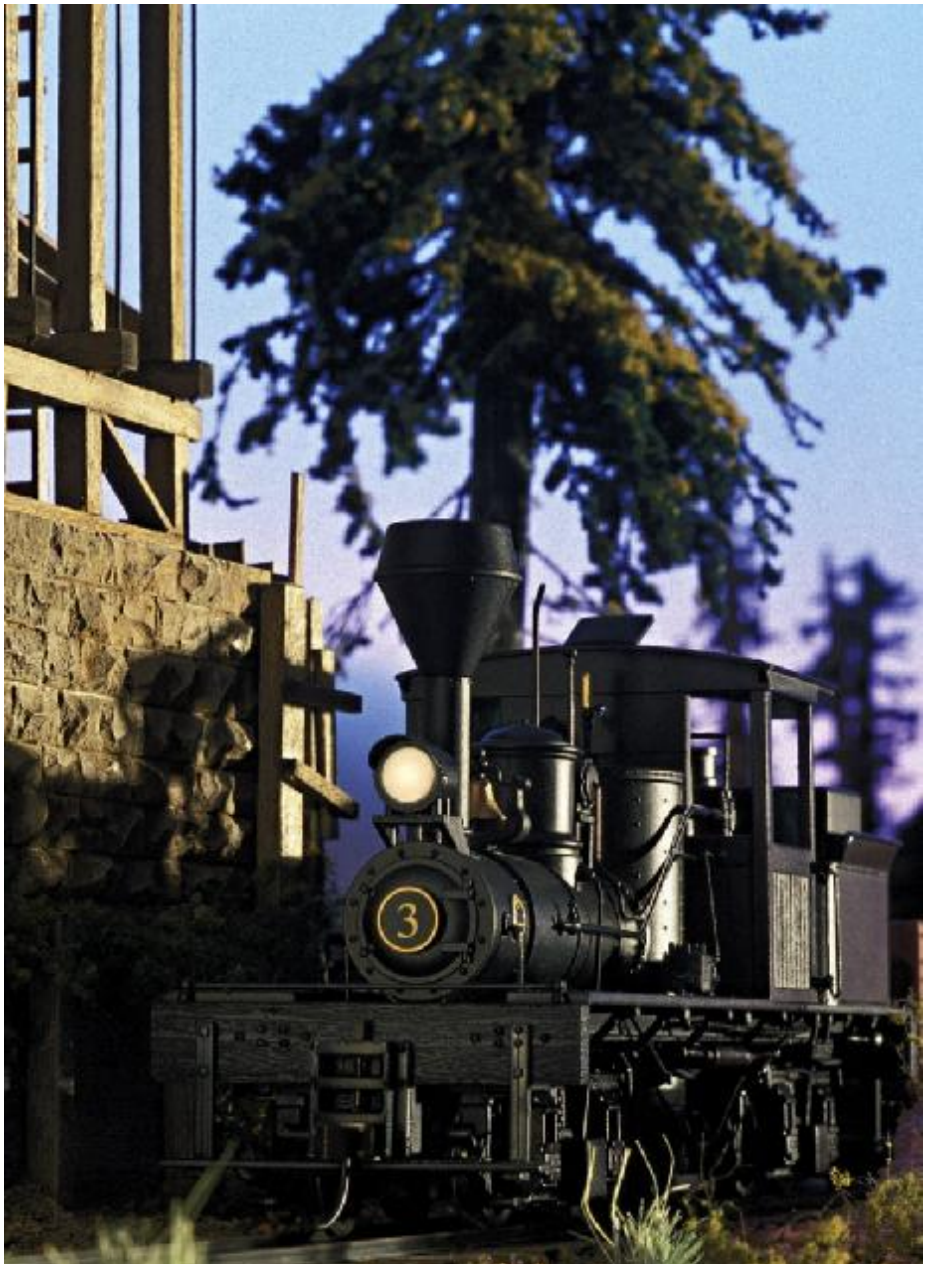
Rochester Model Rails

Dedicated to Quality Model Railroading

VOL. 5, NO. 46 **ROCHESTER, NY** **OCTOBER 2006**



Dinkey Creek Mining Company Shay Number 3 pulls a string of loaded ore cars from the tipple. The scene is on Russ Reinberg's 1 x 6 foot switching diorama. The locomotive is an On30 *Bachmann* Shay. The track is hand laid code 70 nickel silver rail on individual wood ties.

Home Built Hot-wire Foam Cutter

by Richard C. Roth

Foam, and in particular Styrofoam, has become a very strong contender for the number one position in material of choice for model railroaders. It offers some properties that lend themselves well to the hobby. Included are strength, weight (or lack of it), availability in various thicknesses and grades, ability to stand up to the elements such as moisture and temperature with little or no visible change, thus preferential to wood in many applications. It can also be layered into a sandwich with such materials as lightweight fiberboard (cardstock sheets) to form strong multilayered laminates. Another quality can be its ease of working if the proper tools are available.

One of those proper tools is the hot wire foam cutter. This tool is basically a very taunt wire heated to a temperature that will cause the foam to melt in the area where the two meet. The cutter I am going to describe can be made mostly from scraps of lumber, the waste from a countertop installation that included a sink, some wire and a few bolts and screws.

Currently, I have 7 generations of plans for the hot-wire cutters documented, each has one or more improvements over the preceding one. The one I am going to present here is number 6. The reason I am not going to present the latest one is that it requires a bit more work as the tower is made of plywood and requires some routing and other operations done to make the unit look a bit more polished. I made that plan, no. 7, for a layout builder in southern Indiana who wanted 3 units to use in their business and had complained about the rustic look of the earlier versions.

The first thing I had to contend with when I built my first cutter was what I was going to use to provide power. Several I saw on the Web used household power (120 V. AC) with a couple light bulbs in the circuit to reduce the current flow slightly. This concerned me because I didn't want something that was intrinsically unsafe in case something happened that was unexpected.

I also studied several of the early hand held units that were on the market to the tune of $50 to nearly $100. These used a transformer to reduce the voltage to a safe range and some diodes to convert the AC to DC. With that I began to think DC and commenced looking for bird transformers. (Bird transformers are, cheap! Cheap! Cheap!) To provide the amperage I would probably need, I was back in the area of 50 or so dollars, so why not just buy one of the commercial units on the market.

I must admit I was just about to do that when I had one of those eureka moments. I had just finished mowing the lawn with one of those lazy-man's tractor mowers with the electric start. Mine however does not have a generator so every once in a while I had to

recharge the battery. As I walked from my workshop to the tractor carrying the battery charger, a voice said to me, "Use the charger stupid, use the charger!" and I did. Mine had two settings for voltage and two for amperage giving me some variability as well. Since I only used it for its intended purpose infrequently, it would be perfect. Finally, I had my power source, now on to the next challenge.

In the beginning I spent a fair amount of time experimenting with various types of wire to find the one that best meets the needs of the cutter. I tried brass, copper, iron, nichrome, steel and others. The one I settled on was stainless steel. I chose it for several reasons, first and foremost the temperature I could achieve, another was one was cost, and the last, but also not insignificant, was availability. I wanted something that was readily available and easy to use.

Some like brass, iron and the nichrome generated the heat needed, but did not stand up to the application. Each time they heated up, they also relaxed and sagged. This meant that it was almost impossible to keep them taunt very long. Copper had some of the same drawbacks. Finally, I saw a roll of stainless steel wire for hanging pictures. It was about the right diameter, and was inexpensive. When I tried it, it worked wonderfully so stainless steel picture wire became my wire of choice.

So, with the above said, lets get to work on building the hot-wire foam cutter.

Materials List

The deck needs to be smooth and flat so that the foam will slide smoothly across it. I have seen several home built units with a plywood deck and they work well enough, but I like to have a surface that be really jazzed up. That's where the countertop comes into play. Look in the local phone book and find a couple kitchen remodelers or kitchen cabinet dealers. Phone them and ask if they have kitchen sink cutouts available or if they would save you one or so. I have two sources in our area; one has them on occasion for free while the other charges me $2.00 each for them.

Because I like to get a half-dozen or so at a time, I usually prefer to pay the couple bucks a piece to get all that I need at one place at one time without having to go back 2 or 3 times to fulfill my requirements. Also, this outfit uses a CNC router table to make their cuts which results in a uniform edge fully around the cutout. The place with the freebies first drills a ¾" hole then uses a saber saw to make the cut. The cut itself is a bit wavy and the hole poses a point that must be addressed if the table is really like nice (professional).

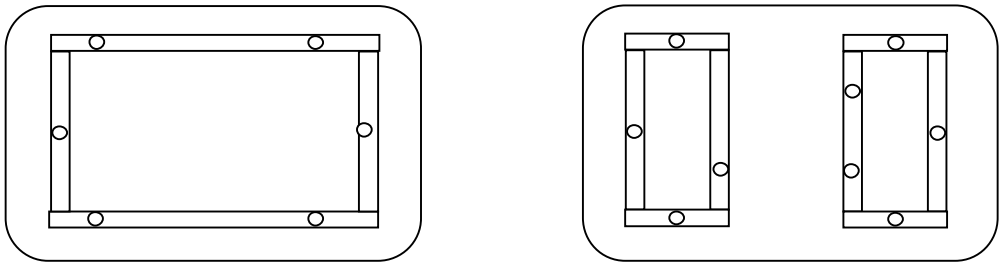
Before we leave **the lumber**, you will need some pieces of 1" x 3" or 1" x 4" scraps from about 12" to 20" inches in length. Either width can be used so there is no loss if only the narrower is available. This lumber will be used to build a support frame and lower wire holder below the table and the tower that holds the upper end of the wire.

Hardware will include some bolts, nuts, washers and some screws. For years I have been using drywall screws for most of my wood projects and this one is no different. A couple different lengths might be advisable. I normally use ¼"-20 screws, nuts and washers as they are readily available and inexpensive. A bill of materials can be found at the end of the article to help in rounding up the necessary pieces.

The Deck

The deck will be fabricated first. Cut four pieces of the dimensional lumber to form a rectangle. I am not going to supply specific dimensions, as they are somewhat dependant on the materials you have at hand. The support frame can be of one of two designs, one large rectangle or two smaller ones as shown below. For clarity I am showing them with the laminate side of the table turned down facing the workbench surface. If you workbench is anything like mine, well used and probably some metal chips and filings embedded, lay a piece of corrugated or something to provide some protection to what will be the table top.

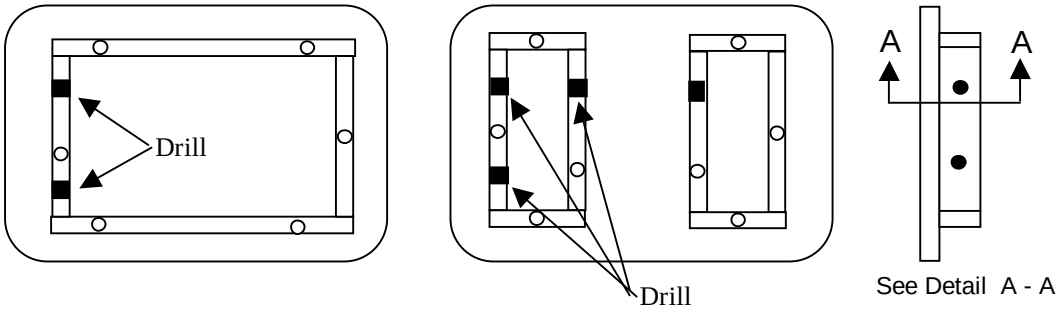
Figure # 1



I join the boards that will form the frames together using 2" drywall screws. I then drill through the edges of the frame boards (that's what the dark rings are) to provide holes for 1-1/4" drywall screws. There is very little force exerted on the frame so it is not necessary to use too many attachment screws. I use the pattern shown to allow for other screws that will be added later to attach the lower wire holder bridge and the upper support arm.

While the base is upside down, two 9/32" holes can be drilled through the bottom boards to allow the insertion of bolts to serve as the attachment points for the cable clips from the battery charger.

Figure # 2



Note: locations are approximate, plus or minus a quarter or half inch will not make it work worse or better.

Next Month – Part II

Rutland/B&M Ball Signal

By Ned Spiller, MMR

Introduction

My Danby, Ludlow and Springfield Railroad is set in Vermont, in the area that was the Rutland Railroad's Bellows Falls subdivision (now the Green Mountain Railroad). In the book "Rutland in Color", by Philip Jordan, there is a picture of a ball signal that controlled the crossing of the Rutland and the B&M in Bellows Falls, Vermont. When I first saw this photo, I thought it was just too cool, and would make a neat addition to my railroad. And since this signal was in use until 1961, it would be prototypical for my 1954 based model railroad.

Rutland in Color, Philip Jordan

Although the generic term for this type of signal is a ball signal, the "balls" themselves were usually formed from sheet metal and in Vermont, were shaped like cans. Some of the railroad employees referred to them as "bucket" signals.

Sources

First came the research. I posted a message on the Rutland and the B&M Yahoo groups to see if anyone had information, pictures, or plans. I did find out that there were some remains of a similar signal in White River Junction, Vermont, sitting on the old abandoned station platform, and someone even posted some pictures. That gave me a little information – for example, that the tower itself was made of wood. In the magazine index on trains.com, I found a couple of articles on ball signals, and got copies from the Kalmbach Library at the NMRA. One of these was an article by Jim Shaughnessy in "Classic Trains" magazine that gave a history and description of all of the ball signals in Vermont, and had two more pictures of the Bellows Falls signal.

Plans

Classic Trains, Jim Shaughnessy

So, it looked like I was going to have to work from the pictures alone. I estimated the building's main dimensions from the size of the signal tender, the door, and the rafter spacing. Then I drew a set of plans for the shanty and for the tower in ¼" scale. (Since the shanty is so small, I found it easier to draw the plans in ¼" scale and convert to HO scale while building.) I drew a view of all four sides plus a plan (top down) view of the shanty, and for the tower itself. I wanted the signal to operate, so after much thought I came up with a design for a mechanism and drew actual size plans for the basic operating part of the tower (the two pulleys, the shroud, and the "balls") and the part of the operating mechanism that would be under the layout surface.

The Model

The model consists of three major parts: the shanty, the signal tower, and the mechanism. (*See photo of the completed model on the next page.)*

The shanty is made mostly of styrene. I used sheet novelty and v-groove siding and dimensional materials from *Evergreen* and Plastruct. The roof is styrene with masking tape used for the rolled roofing on the prototype. I tried making the platform from styrene, but I couldn't get it painted to look like wood, so I made a platform from basswood dimensional material and stained it with an alcohol and shoe dye stain. The interesting base to the chimney is made from styrene, while the chimney itself is brass tubing with a shim brass cap.

The completed Rutland/B & M Ball Signal showing three “balls”. Digital image by Ned Spiller.

Next Month – Part II

Installing Decoders in *Old Locos*

Part 4

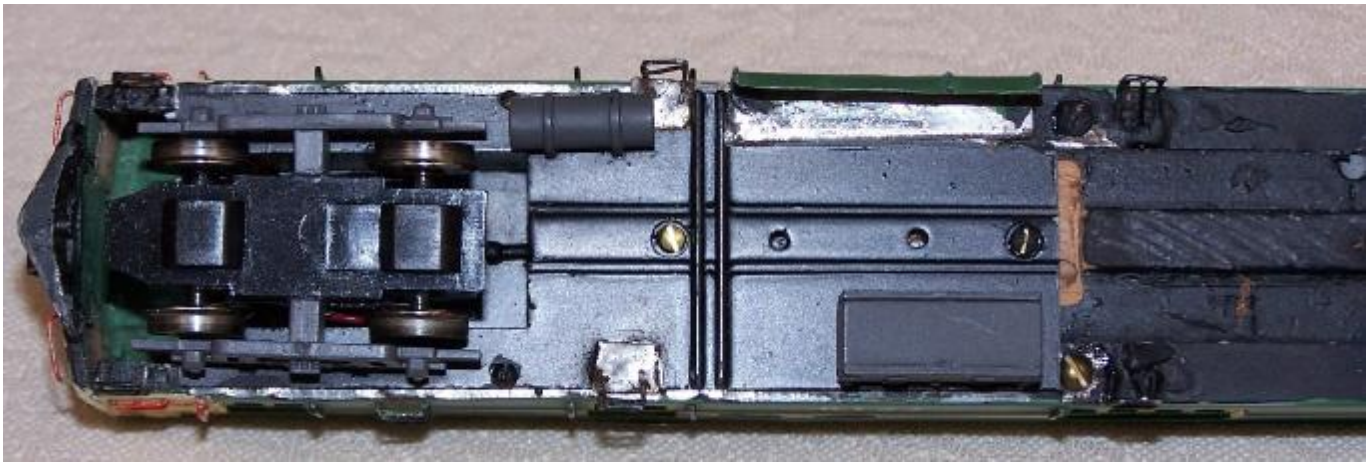
Clinic Given at the NMRA NFR LSD Meet in the Fall of 2005

by Dave Mitchell

Example 7 – Walthers Gas Electric

This model, built and painted by Gary Cox, was given to me by Gary shortly before he passed away. I had known Gary for over 40 years, and always admired his modeling. The drive mechanism was very old, and noisy. I had previously seen an advertisement from Train World, offering Bachman Gas-Electrics for $14.95 plus tax and shipping. Since I model gas-electric cars, I ordered 6 of them at once. Checking the Walthers wood and steel model, I decided to cut the frame of the Bachman model just in back of the motor/flywheel assembly.

I then modified the front of the floor of the Walthers model, and attached the Bachman mechanism. This provided me with a can motor, flywheel, and power truck assembly in one unit. I also removed the rear truck of the Bachman model and installed it on the rear of the Walthers model. This gave me 8-wheel power pickup in place of the 4 wheel on the original Walthers set up. The DCC decoder was mounted in the roof of the Walthers model.

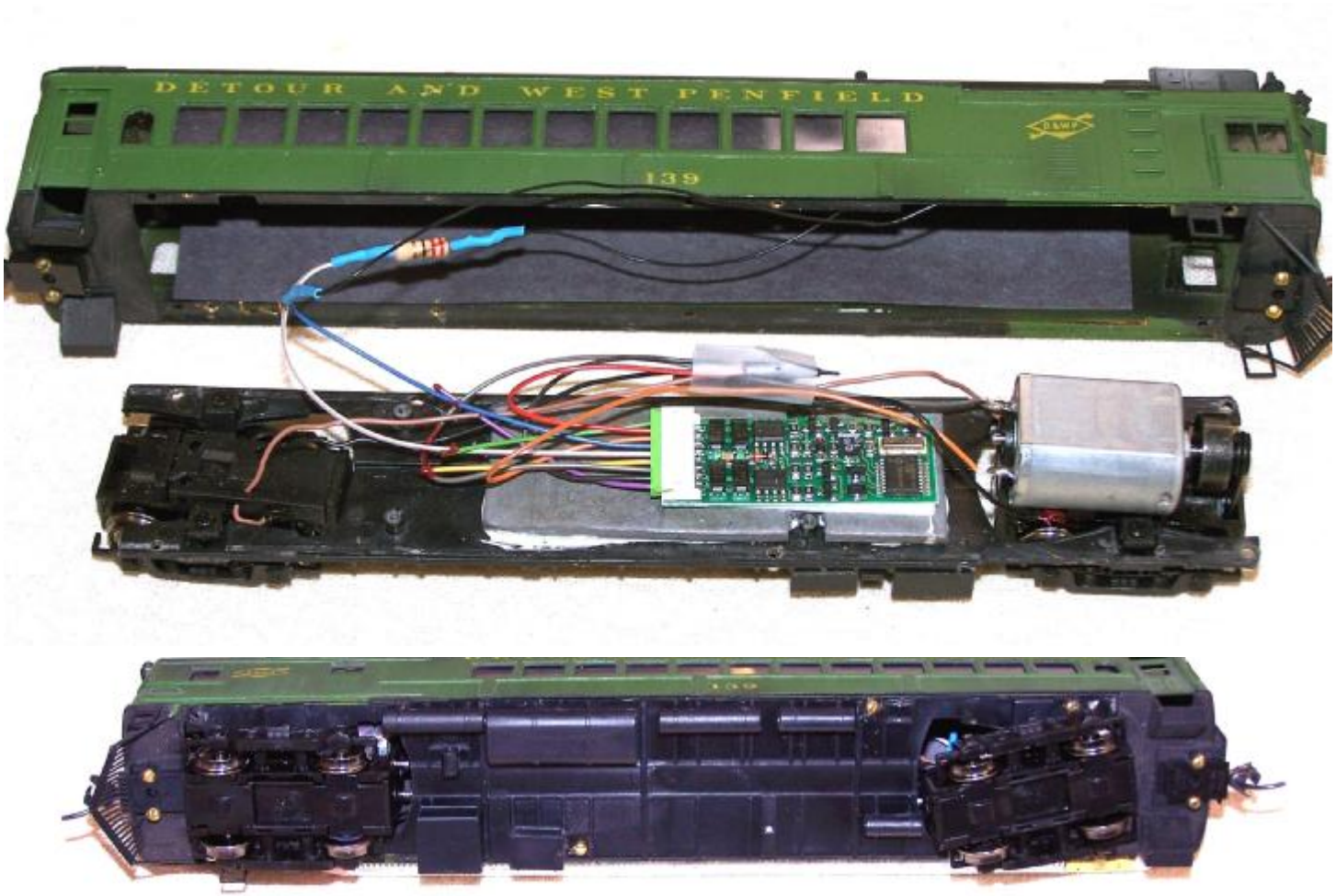


Example 8 - Gem Models Brass Gas-Electric

The story here is almost the same as Example 6. I knew Walt Peter both thru model railroading and working at Kodak. His Detour & West Penfield RR was a large basement layout, using one of the first electronic control schemes for operation. Many of us enjoyed the operating sessions on Walt's layout. At his estate sale I purchased a brass gas-electric that was painted and lettered for Walt's layout. The drive had never worked right, and when I got it, the package included a replacement LaBelle drive, which required a lot of fabrication and did not have a good reputation from those who had used it before.

About this same time Train World offered Walthers new Gas Electric, which used a can motor and belt drive to the drive gears and had 8 wheel pickup, for $21.45 plus tax and shipping. I ordered 6 of these. Comparing the Walthers model to the Gem model revealed that the truck centers were identical. All that was required was to cut off the Walthers frame just in front of the rear steps, and drill and tap mounting holes in the brass frame of the Gem model. A small area of the Gem frame had to be filed out to clear the new Walthers mechanism. I mounted the decoder over the motor.

The hardest part of this project was protecting Walt's paint job on the Gem model while I was doing the modifications.



Next Month – Part 5

Ask Doctor Dick (The Scenery Doctor)

OCRR@frontiernet.net

Sara writes:

Doctor Dick - I see that this is the 46th issue of the ***Rochester Model Rails*** yet I am unable to find an Index to the many articles contained in your magazine including all the articles back to Issue # 1 in February 2002. Will one become available soon?

Doc:

Sara – well possibly. It's funny that you bring this up since I have been thinking about it myself. Every time I need to find an old article I have to go through 46 issues too.

An Index would be nice especially for all those *Doctor Dick* articles on Scenery. The only issue is the time and money it takes to make such an Index and distribute it.

You recall that I did make such an Index for the *North Coast Engineering DCC Power Pro Radio System*, which was about nine pages or so. This took some time to compile and was no simple task. And it was free.

Here is what I am offering you and the readers of the *Rochester Model Rails* at this time.

The 50th Issue (February 2007) of the *RMR* is expected to be issued about January 1st, 2007. After that issue, I could produce an Index, available on a CD - *for one time only.*

The CD would contain a PDF File with a very detailed Index of all articles, authors, subjects, etc. contained in the first 50 issues of the *RMR*.

This Index will only be offered if there is sufficient interest from the readers.

The price is expected to be $10.00 plus ~$2.00 (US Dollars) for the CD, disc case, packaging and shipping. (Canadian shipping will be higher.)

Orders and checks for the Index must be received by January 1st. Once the initial orders are filled, no additional Indexes will be mailed. Address: Doctor Dick, 1231 Wellington Drive, Victor, NY 14564-1504.

Info: OCRR@frontiernet.net

The Model RR Post Office

Number 18 in the Series

by Norm Wright

Scott # 3184d, issued on May 28, 1998, depicts a boy with a Lionel-type toy train consisting of a steam locomotive & passenger cars. The i[1]Illustration on the stamp is from the cover of a 1929 Lionel train catalog; "boy" has been identified as Joe Adda, Jr., of Hunterdon County, N.J., son of the original artist. In 1998, at age 75, Adda Jr. reportedly was still a model railroader. ***Note:*** Descriptive text appears on the gummed side of each stamp.

Future Articles

A Trip Down Nostalgia Lane

Resin Casting

Modeling Keuka Lake - Hammondsport

Siegel Street Revisited

Tortoise Installation Made Easy

Building a Large Sawmill

The Climax Locomotive

NEXT MONTH

The Santa Fe CF - 7

The Trials and Tribulations of a Large Model Railroad Club's Chief Engineer – Pete Darling

Building a Hot Wire Foam Cutter Part II

Rutland/B & M Ball Signal – Part II

Decoder Installation in *Older Locomotives* – Part 5

Rochester Model Rails

E MAGAZINE

NOTICE

All articles published in the *Rochester Model Rails* are strictly the opinions of the authors and do not represent the opinion of the *Rochester Model Rails* management. The authors solely take full responsibility for their opinions, comments, drawings and images.

Editor and Publisher
Richard A. Senges

Web Master
Ted Larson

Columnists
Leo Adamski
Gerald Brimacombe
Bill Carr
Fred Cupp
Jim Hutton
Betty James
Ray Howard
George Irwin
Steve Levine
Jack Matsik
Dave Mitchell
Lou Nost
Gary Patterson
Richard Roth
Harold W. Russell, MMR
Frank T. Smith
Gordon Spalty
Ned Spiller, MMR
David L. Thompson
Otto Vondrak
Norm Wright

Authors: Articles, digital images, and plans are welcome.

Mailing Address
1231 Wellington Drive
Victor, NY 14564

Old Issues of *RMR*

Web Site:
www.trainweb.org/rmr

Coming Train Events for 2006/2007

Updated 8- 29 - 2006

September 9 **Niagara Falls, NY** - The Sept. meet of the International Division of the NMRA will be held at the Niagara-Orleans Model Railroad Engineers club at Summit Park Mall, Williams RD. Niagara Falls N.Y. at 9:30 A.M. Clinics, and a Switching Contest will be held, and the clubs layouts will be open.

September 9-10 **Buffalo, NY** – Buffalo Central Terminal First Train Show.
Info: www.buffalocentralterminal.org

October 21, 2006 Lakeshores Division NMRA Fall Meet, Cayuga Valley Railroad Modelers
Knights of Columbus Hall , Auburn, NY
Clinics, Model Contest, Election of Officers, Layout Tours
Info: Dave Mitchell, LSD Superintendent dbmitch@rochester.rr.com

Sept. 30 – Oct. 1 **Brampton, Canada** - Brampton Model Railroad Show, Orangeville Shortline Model

October 14 – 15 **Bowmanville, Ontario, Canada –** 20th Annual Train Show, Bowmanville High School**,** 49 Liberty Street North. Sat – 10:00 am - 4:30pm, Sun. 10 am - 4:00pm. Adults $5, Senior $4, Family $10. Presented by the Soper Valley Model Railroad Association. Contact: Ron Radcliffe 905-987-3099

October 20 – 22 **Parsippany, NY –** NMRA NER 2006 Fall Convention

November 4- 5 **Syracuse NY** – 32nd edition of the Central New York Train Fair. One of the largest train shows In the Northeast covering 150,000 square feet in two large buildings at the New York State Fairground. More that 100 vendors; more than 50 operating layouts; all scales. Sat. 10:00am – 6:00pm. Sunday 10:00am – 5:00pm. Sponsored By Central New York NRHS.
www.rrhistorical-2.com/cnynrhs Info: cnynrhs@aol.com

November 12 **Batavia, NY** - The Great Batavia Train Show, Batavia Downs Gaming, 9:30am – 3:30pm. Donation $5.00

December 9-10 **Rochester, NY –** The *New and Expanded* Two Day RIT Train Show and Sale, Location – RIT Field House, many layouts displayed, largest train show in western NY.

2007

January 27-28 **West Springfield, MA –** Amherst Railway Society Big Railroad Hobby Show, Eastern States Exposition Grounds, Memorial Avenue. Info: www.AmherstRail.org

February 16-18 **Denver, CO -** 22nd Annual Sn3 Symposium. Contact: Doug Junda 303-275-8926

April 27- 29 **Rochester, NY –** NMRA NFR convention. The “Flower City Flyer” event will include the usual – model railroad clinics, model contests, and layout tours. Info: Harvey McIntyre: hmcintyre4@cogeco.ca