

The

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LION ROARS



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Lionel® Collectors Club of America

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What to do if your Lion Roars did not arrive

Send Assistant editor Larry Black a postcard or letter with your name, address and phone number. Do NOT call Larry as that will just slow everything down. He must check the mailing labels to see if the Post Office thinks you have moved. Larry cannot check this information over the phone with you and he needs to verify your address which is best done by you writing it down in a very legible fashion.

Articles and Photos

The Lion Roars needs good color photos of your layout for Trackside Photos. *Please do not write on the photos.* Use a Post-it™ note, instead. Articles on anything related to Lionel trains are welcome and needed. Please send to Editor, The Lion Roars. Comments and suggestions are always welcome.

Glenn Patsch

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The Lion Roars

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The LCCA 1993 Annual Convention **July 21-25, 1993 in Dearborn, Michigan**

Bill Button (313) 722-7464 is the Convention host for the LCCA 1993 Annual Convention. The convention will be at the Hyatt Regency Hotel in Dearborn, Michigan. Tours planned include: the Lionel factory, Madison Hardware, Lionel Visitor's Center layout, CaRail (Dick Kughn's private antique auto and toy train museum), the Henry Ford museum and Greenfield village. Registration materials will be included in this issue (April 1993) of *The Lion Roars*. Plan to attend this terrific event.

Front Cover: The Lionel Lion.

Back Cover: Lionel Smithsonian Collection Dreyfuss Hudson Poster. See page 31 for more information.

Lionel® News and Views

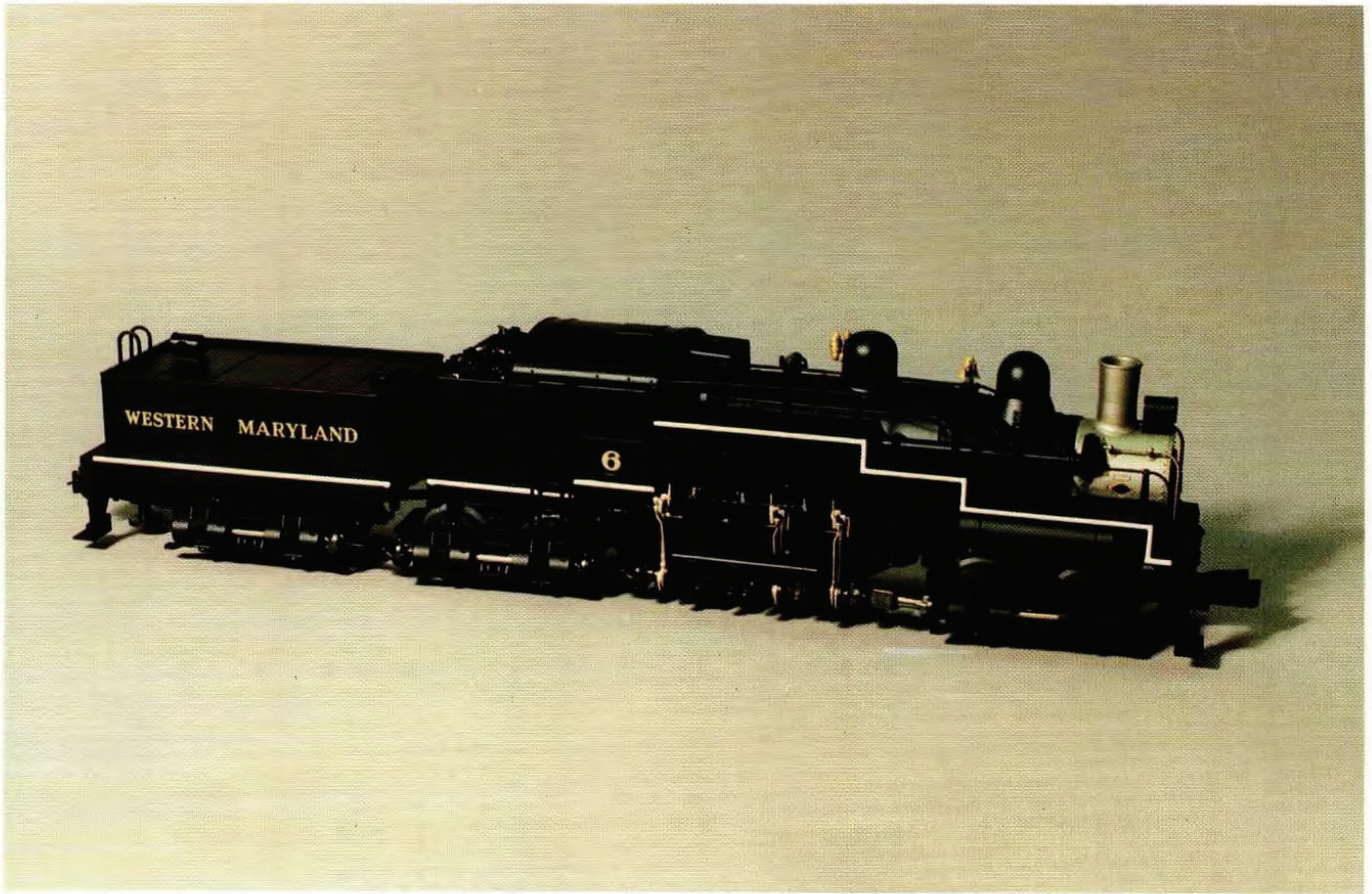


Photo 1 - The new Lionel® Western Maryland Shay Locomotive

Lionel's New Shay

We finally got a chance to take a good look at Lionel's new Western Maryland Shay. Photo 1 shows the new loco. There's an amazing amount of moving parts on this loco. Photo 2 shows the loco from the opposite side. Interestingly, the can motor drives the wheels differently than any other Lionel locomotive. The motor actually drives the crankshaft, which transmits power to the front, back and tender trucks through universal joints and couplings which allow the trucks to swing independently. Photo 3 is a close-up shot of half of the loco's drive train. Notice the small brass gear at the right end of the photo. This is the gear that is driven by the can motor gears. You can also see the "square peg in a square hole" connection to the rear truck. The front truck operates identically. At the left end of Photo 3, you can see the square hole portion of this connection for the tender. Bevel gears on the shaft transmit the power to the wheels. Photo 4 shows more of the detail. On the real shay, the vertical cylinders supply the power to drive the shaft.

Photo 5 is the tender. The tender carries water and sand. Coal is carried behind the engineer's cab. At the right of Photo 5 you can see the square peg portion on the connection which mates to the square peg shown at the left of Photo 3. Photo 6 shows the underside of the tender. Both locomotive trucks and the tender truck have a roller pick-up. The tender

also features a backup light which operates when the loco moves in reverse. The tender houses the RailSounds™ circuitry. A new method was used on this tender to activate the chug sound. Photo 7 shows a close-up of the tender truck. Instead of a magnetic activation, like the other Lionel engines that use RailSounds, an optical method is used. The small notched wheel on the axle breaks a light beam five times per revolution to produce a more accurate chug for the shay. A real shay chugs much more rapidly than a standard steam loco.

There were so many screws on the shay, we weren't sure which ones to remove. That didn't stop us though. Photo 8 is a bottom view of the shay. The first piece we removed was the cover over the drive gear. Removal of four screws allowed us to lift it off. Photo 9 shows the shay with this cover removed. Protruding from the loco was a vertical shaft from the can motor. Photo 10, on page 8, shows the inside of the gear cover. When the cover was removed, one of the gear shafts remained on the loco, but would have to be replaced in the gear cover for reassembly.

To see more of the loco interior, we first replaced the gear cover, then removed four screws which secure the chassis to the boiler casting. Photo 11 shows the results. Here you can see the can motor and the constant voltage lighting circuit. There are two switches which are accessible from

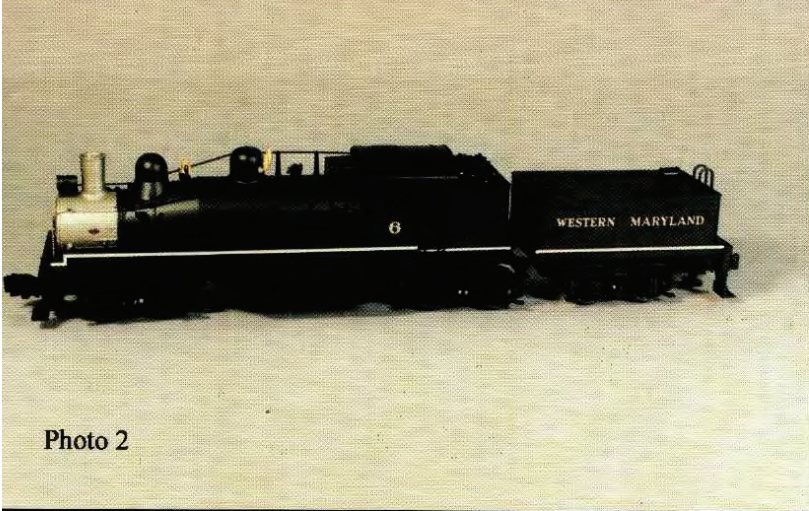


Photo 2

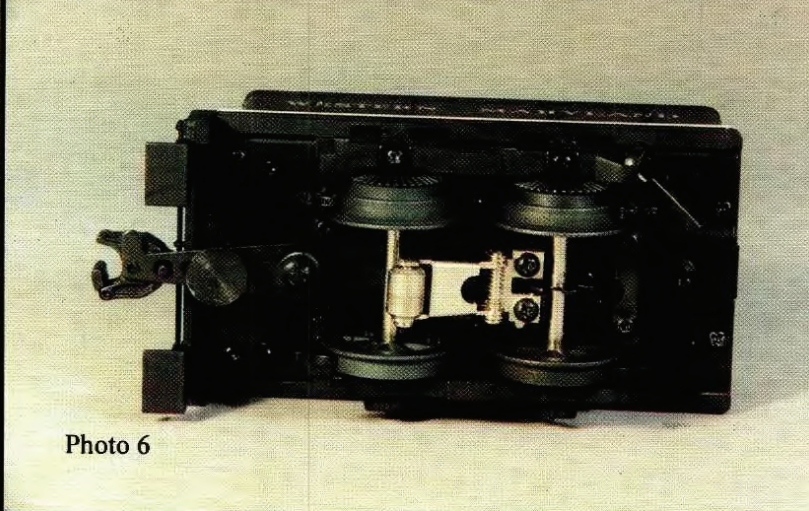


Photo 6

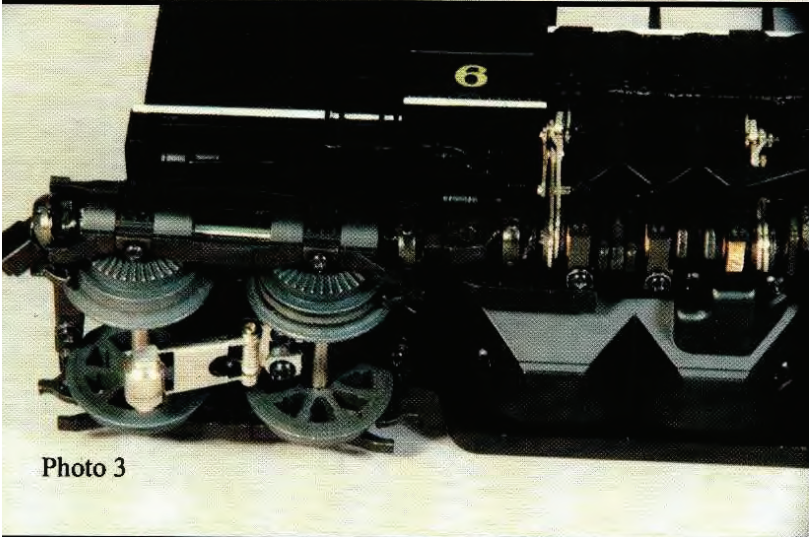


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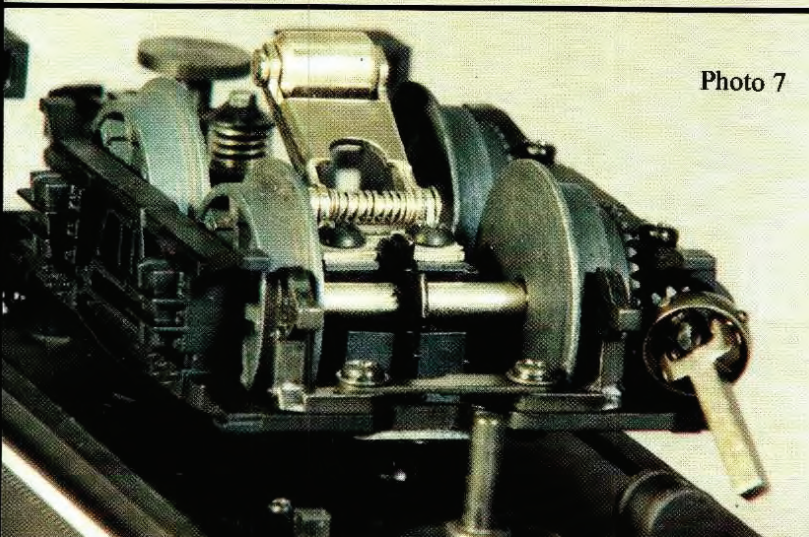


Photo 7

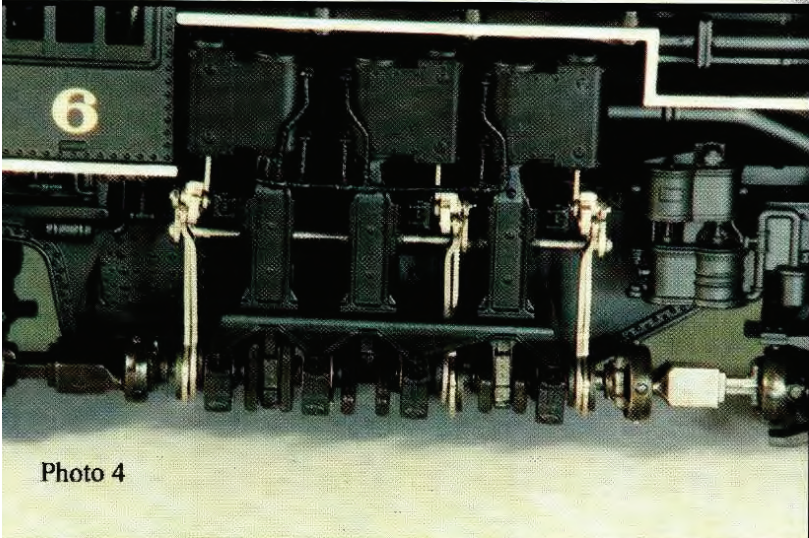


Photo 4

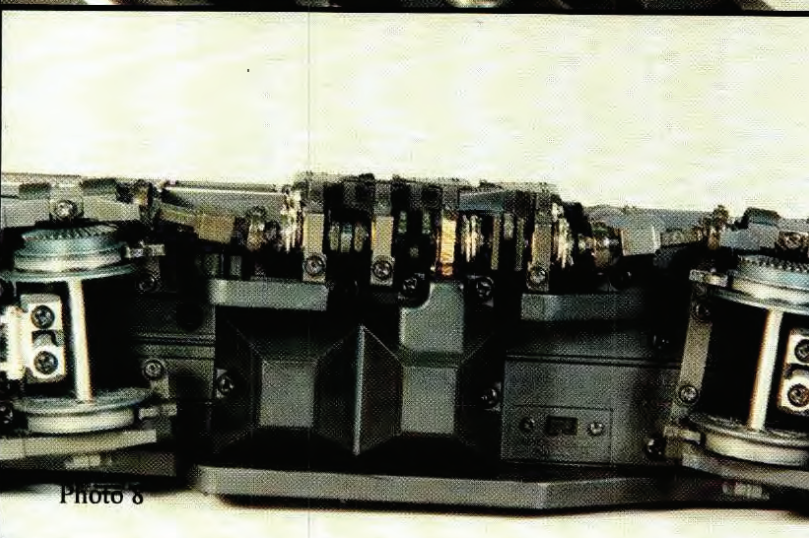


Photo 8

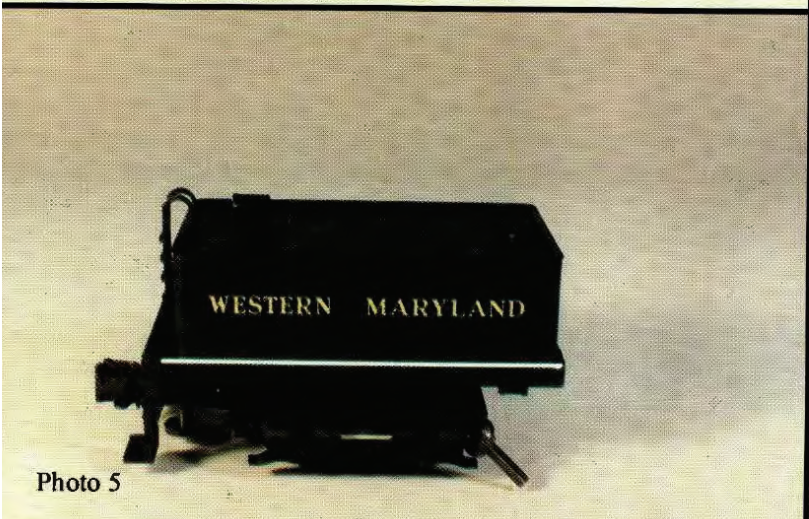


Photo 5

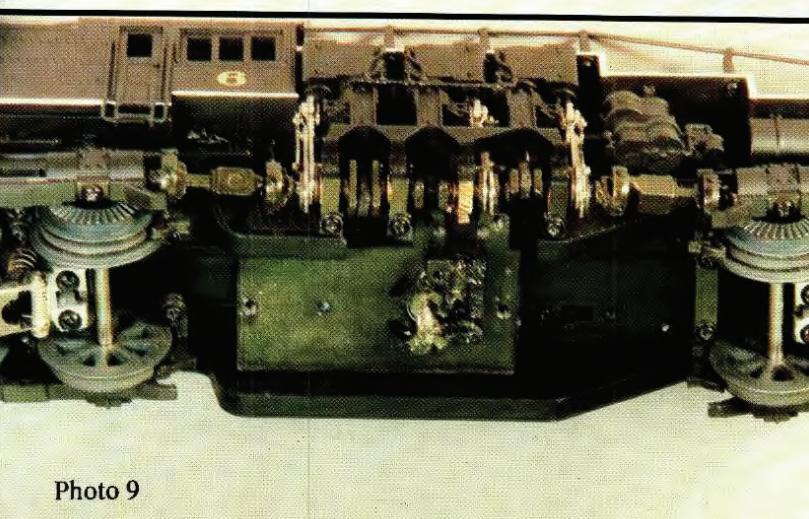


Photo 9

underneath the loco. One controls the E-unit and the other allows you to switch off the smokestack. If you plan to run your loco without smoke fluid, its best to switch off the power to the smoke unit.

Once the boiler was separated from the chassis, two additional screws came into view which allowed removal of the cab section of the boiler casting. Photo 12, on page 8, shows the boiler resting on the chassis with the cab section removed. This is where the E-unit is housed. This is a QSI electronic E-unit. This E-unit resets to neutral before forward after about 10 seconds without power.

Notice also that this loco is manned with both an engineer and a fireman. The boiler and cab castings are quite hefty. Rubber traction tires, quite similar to those used on the Denver & Rio Grande Alcos are used on four of the wheels. The trucks on this loco are assembled with screws and can be disassembled. In fact they must be disassembled in order to change or replace the traction tires. Four extra tires are supplied, but the instructions warn that it is best to return it to a service station for tire replacement. Those experienced in mechanical disassembly won't have problem attempting it themselves.

Photo 13 shows the interior of the tender. The tender is completely filled with the RailSounds™ circuitry. A switch underneath the tender can be used to turn off the chug sound. The whistle and bell can still be operated with the chug sound turned off. The tender casting is also quite thick and hefty. The boiler and tender castings provide ample ballast and additional weights are not at all necessary.

We took the shay out for a test spin and found it ran well. Putting the loco and tender on the track is a meticulous task. The coupling must be inserted and a pin on the tender inserted into the draw bar. There is also a four pin plug electrical connection. We ran the loco on a loop of 072 track. The loco is geared to run slowly with a lot of power. This is typical of real shays.

Don't expect to win any tinsplate races with this loco. Even at full ZW transformer throttle, the loco does not speed. The current measurement surprised us with a draw of only 1.25 amps. This draw was pretty consistent throughout the entire speed range. We found it drew slightly more, about 1.3 amps in reverse. This may be due to the fact that the tender back-up light is only on when the loco operates in reverse.

While operating, we ran into one problem. The tender tipped back slightly causing the coupler pull to contact the third rail, causing a short. We found the problem and there's an easy solution. First, look at photo 14. Notice the electrical cord. It is longer than the space between the tender and loco. This coiled up cord put pressure on the tender and allowed it to easily tip. The tender only rides on one truck.

Once we identified the problem, the solution was easy and effective. When placing the loco and tender on the track, first plug in the cord. Then push the excess cord back into the loco so that no more than necessary is outside the tender. Then connect the drawbar and the drive coupling. This allows the tender to sit as it should with no pressure lifting it. Photo 15 shows the wire correctly in place.

Changes and Corrections

On February 17 Lionel announced several changes in specifications given in the Lionel Book Two 1993 catalog. First, the New York Central Flyer Set will feature a black loco instead of gray. The tender will be a square black coal type. The flatcar will be yellow with black stakes and bulkheads, and the boxcar will be green.

The Pere Marquette Berkshire will feature enhanced detailing and will include Magna-traction.® Last issue we reported that the matching Madison cars would not be phenolic. Lionel has announced that they will be ABS plastic and that the heavy wall thickness will remain.

We reported last issue that there was a chance that Lionel would be changing the graphics on the RS-3 Christmas engine. It has now been made official. The "Happy Holiday" graphics on the RS-3 Christmas Engine will be changed to match the script of the No. 16547 Christmas caboose.

The Standard O Railbox boxcar with RailSounds™ will be marked with No. 17214 instead of No. 16654 shown in the catalog.

The Lionel TV Car viewing screen will show a picture of the Lionel Trains Inc. Headquarters in place of the "train on track" picture shown in the catalog.

Here's a real disappointment - The Large Scale Union Pacific GP-20 Diesels will not have the black outline around the red lettering. This would have been the first time Lionel used the prototypically correct outlining. I'm sorry to see it go. Both the powered unit and the dummy will include both knuckle couplers and hook and loop couplers. The knuckle couplers will be installed.

From the Lionel Book One 1993 catalog, here's a change many collectors had asked for. The new 6464 boxcar series will feature full metal frames and both the upper and lower door guides will be metal. This of course is just how the 6464 cars were when they originally came out.

Finally, the No. 16060 Santa Fe Observation Car will be offered for separate sale in the 1993 Stocking Stuffer catalog.

TM's Toy Train Revue No. 6

The sixth video in the Toy Train Revue series is out and features another sixty minutes of model trains. This latest release features a trip to Oscar Fox, in York, Pennsylvania. Oscar' layout is unique in that it features four different gauges, Standard, O, G, and N. That's quite a combination. Oscar's goal was to build a display for his trains without regard to scale. His layout has been expanded several times and includes several levels.

I thought his operating shelf displays were quite clever. Just in front of his static wall displays is a long straight section of track with a bumper at each end. A locomotive runs on this section heading for an apparent crash at the end. All is safe though, the section at each end of the track is dead, so the train comes to a halt before catastrophe results. Then, on his control panel he pushes a momentary contact switch which powers the end section. This button is pushed twice, to set the E-unit to reverse, and off the train goes in

the opposite direction. The near collision always keeps visitors interested and on their toes.

The tour of the new Lionel Visitor Center layout is completed in this fourth part, covering the scenery, structures and accessories. I can't help wondering how interested we'd be had a similar series been done on the original Lionel showroom layout in New York, in 1949. Hold on to these tapes, surely there'll be the same interest many years from now as the layout is changed.

I've mentioned in this column that the Large Scale trains seem to attract more women than any of the other gauges. Elaine Silets is one of those ladies who is attracted to it and her garden railway is quite an accomplishment. The layout has 560 feet of track on three loops and Elaine operates five trains on it. Elaine discusses on the tape some of her techniques. Using garden hose to initially layout the track work was clever. Her husband collects O gauge and helped her with the layout. With two train collectors in the house, each collecting a different gauge, I wonder who decides how the train budget is spent?

Next on the tape is a 1949 Marx set. This set is a real deluxe one for Marx. The set was offered through Montgomery Wards and included one engine and two sets are cars one for passengers and one for freight. Enough track and switches were supplied to allow the engine to leave one train on a siding and pick up the other one.

Finally, the tape featured a talk with Lionel's production Manager, Steve Saxton. Here you see much of the 1993 Book I merchandise running with comments by Steve. The Toy Train Revue video can be ordered as part of an annual subscription or purchased individually.

TM's Collector Journal

The third issue in Tom McComas' Toy Train Revue, The Collectors Journal is out and the first change that you see is the lack of any color. Last issue we mentioned that Kalmbach publications would not allow TM to advertise in their magazines because they felt he was a competitor. Not being able to advertise the hobby's most widely read magazines has hurt and Tom decided to go to black and white for this issue, but hopes to return to color next issue.

The differences between the two magazines, *Classic Toy Trains*, and Tom's is evident with the contents of this issue. An interesting case of two train collectors suing each other over a collection sale of over \$100,000 makes for interesting reading and provides a caution for others. The magazine presents both sides of the story and promises to follow up on the outcome. Interesting reading for collector's and not the type of story you'd expect to see - with names and all mentioned - just as a newspaper might do.

Tom feels its important to get these stories out so that collectors can better educate themselves about what's going on out there. I'll repeat my opinion, that I think both CTT and TTR are magazines worth reading and there's room for both of them.

Other interesting articles include a continuation of the articles on Lionel Motorized Units. I was particularly

interested in the publication of original manufacturing quantities. Interesting reading. Other articles include: Rating the Postwar F-3 Diesels, Scout-Type Boxcars, Early Marx, an article on Scams - what to look out for, a Market Report - what's hot and what's not, and more.

As with previous issues, updated price guides are also included. On this issue, prices for Lionel boxes from 1945 through 1969 and another for Lionel sets from 1970 through 1992. A subscription to the Journal costs \$20 a year. A subscription to the video Toy Train Revue is \$85 a year (four tapes) or \$24.95 per video. To order either, call TM Books and Videos at (800) 892-2822.

I'd Like to See

Fred Jabborra writes that he would like to see an 027 center I-beam lumber car. He'd also like to see a TTUX type car that could carry both containers and piggy back trailers. Another request is a longer flat car for 027 track. Finally, how about a bulkhead flat car for 027. I think the bulkhead car you're looking for is on page 33 of the 1993 Book II catalog. We work fast!

Al Gustafson would like to see the Santa Fe war bonnet paint scheme used on modern diesels. The Santa Fe Railroad is currently using the popular paint scheme on many of its new diesels. They look great and would surely be popular as Lionel trains. Al would also like to see Lionel devote more of its resources to developing modern diesels and a new metal truck. Thanks Al for the comments.

Many whom I've spoken with are pleased that Lionel has finally decided to make insulated outside rail track again. Bill Hourigan is in the process of building a new layout and would like to see the insulated track also made available in curved sections. Usually several sections of insulated track are used together to control an accessory, like a crossing gate, and that often includes a curved track. Currently only straight sections are listed in the catalog. If you haven't used insulated track sections, do give them a try. Check out Bill Beatty's Back Shop articles in the December 1992 and February 1993 issues of *The Lion Roars* for more details.

A couple of members made reference to the fact that the new Norfolk Southern set was supplied with die-cast trucks, but have returned to the plastic knuckle. Joe Sadorf and Ivan Schlan would like to see the die-cast knuckle return. I think you have lots of company on that one. While we're at it, how about a more modern coupler and a metal armature to replace the plastic one?

Ivan also brought up an interesting point about the new catalog. On page 32 of the catalog, die-cast sprung trucks are offered for separate sale. The catalog states that "you now have the opportunity to place them on any piece of Lionel O gauge rolling stock you desire." The problem says Ivan, is that the plastic trucks are riveted in place and would be difficult for the average person to remove and replace with the die-cast ones - Something I hadn't thought of.

If you have something you'd like to see Lionel make, why not send it in. We'll print and maybe you'll see it in a future Lionel catalog.



Photo 10

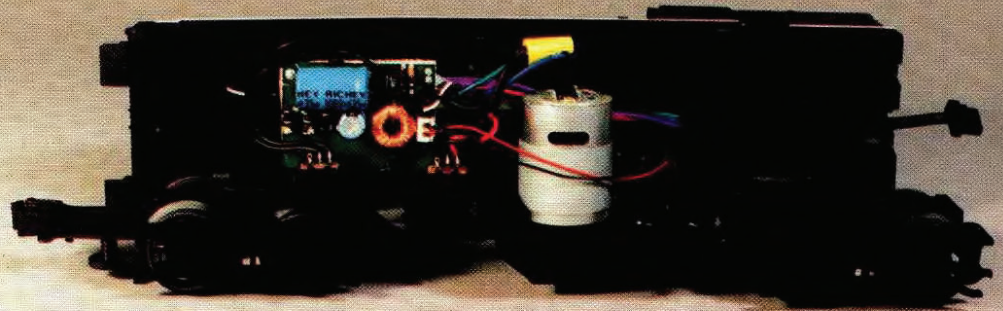


Photo 11

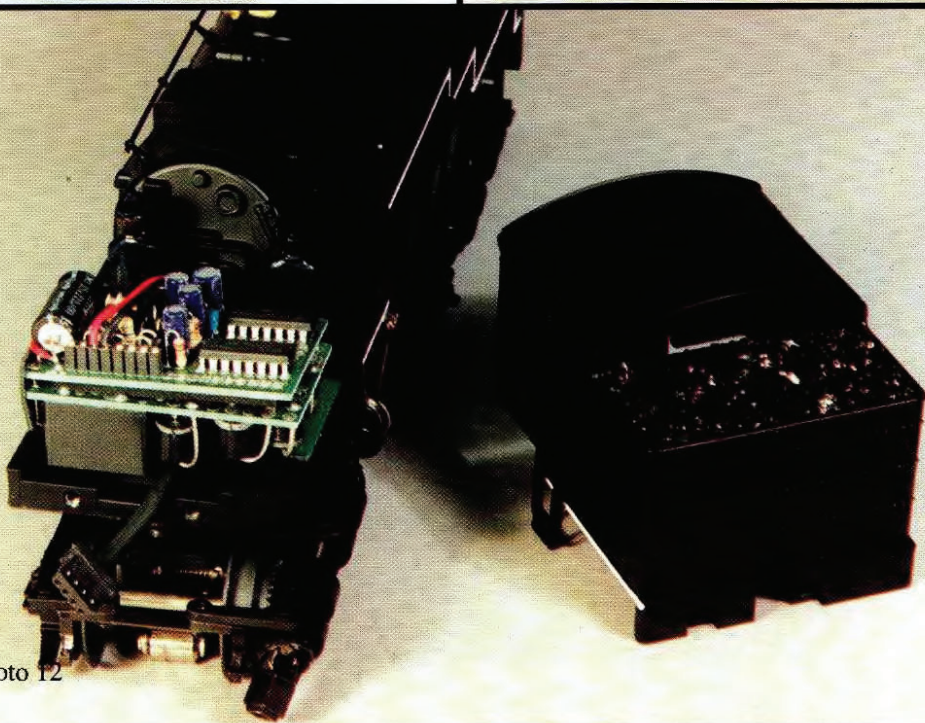


Photo 12



Photo 14

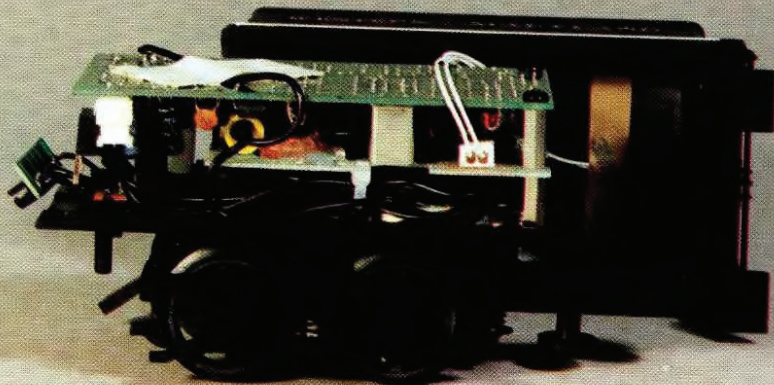


Photo 13



Photo 15

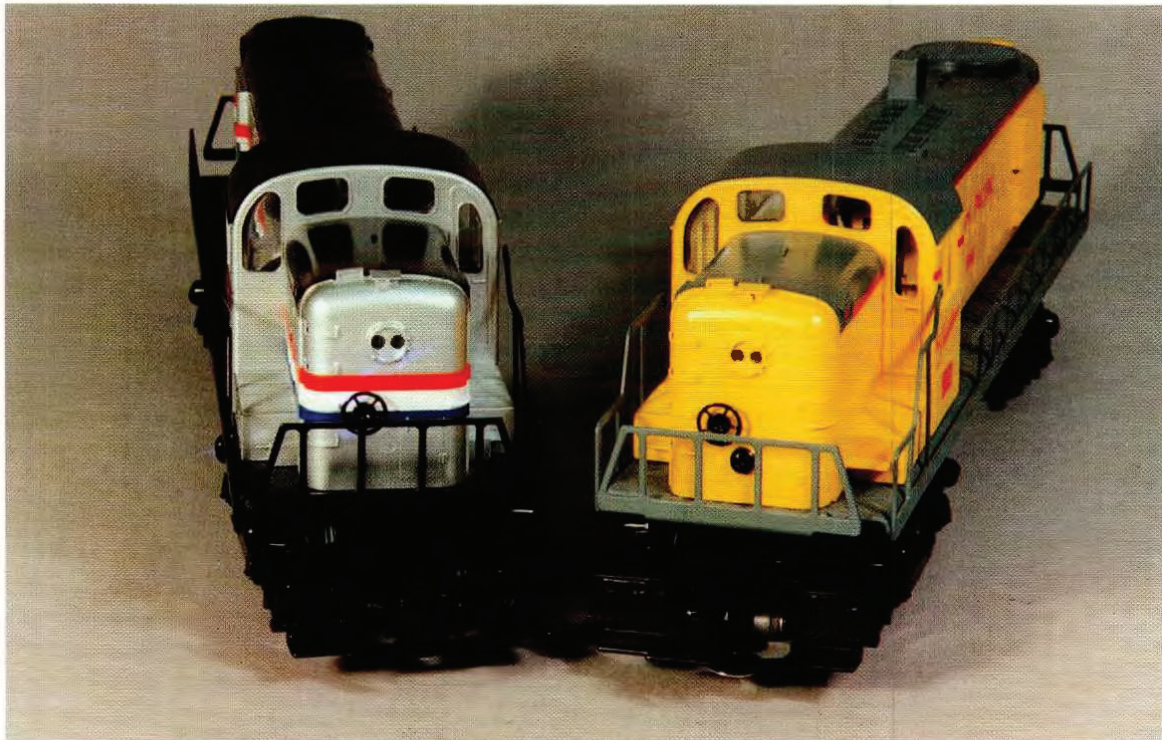


Photo 16 - Amtrak RS-3 and Union Pacific RS-3 diesels

Amtrak RS-3 Diesel

We had a chance to test drive a friends Amtrak Work Train set. The five color Amtrak engine ran well and we noticed a couple of changes in the RS-3. Photo 16 shows an older Union Pacific RS-3 along side the new Amtrak RS-3. Look carefully at the fronts of the two locos. Notice that the shell mounting screw at the front of the UP is missing on the Amtrak. The screws which secure the shell onto the chassis of the Amtrak are all located underneath. Four screws now

hold the shell in place. Photo 17 and 18 shows the locos with their shells removed. If you look carefully you can see changes in the Amtrak shell for the new mounting method. New boxcars will soon feature this method of securing the bottom of the car. The other obvious difference in the two locos is the addition of an electronic horn with the Amtrak set. As I said, the set ran quite well and included a couple first time cars. The rail carrying car and the re-designed wheel car make their first appearance in this set.

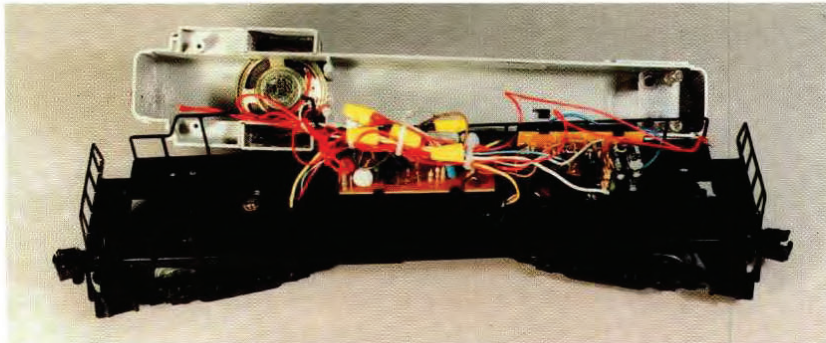


Photo 17 - Inside the Amtrak RS-3 diesel

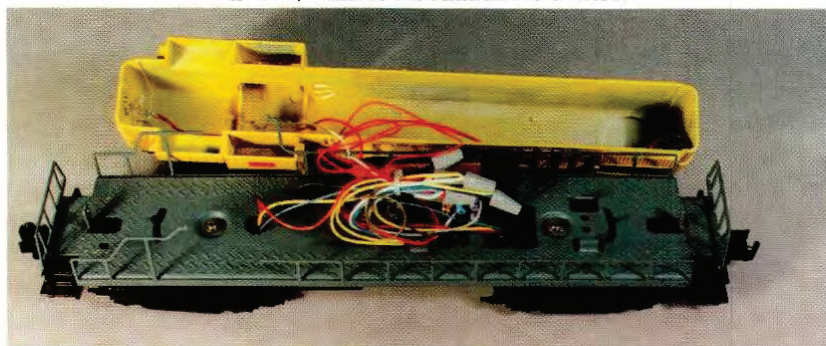


Photo 18 - Inside the Union Pacific RS-3 diesel

New From Greenberg

Just published is Greenberg's Lionel Postwar Operating Instructions with Layout Plans. This is a collection of Lionel consumer instruction sheets. The previous edition was published in 1978 and this new volume has some additions. Original instructions sheets can be hard to locate and this volume contains most of the postwar sheets. Although having these instructions can help answer many operator questions, I must say that the book presented many questions as well. The book begins with a numerically ordered table of contents, sectioned by category. This is the best way to locate a particular item, since the order in the book can be confusing. There is a complete numerical index as well.

We found an abundance of items which were in the wrong place, or had parts missing and some parts printed with the wrong instruction sheet. Although the book states on its back cover that it contains "reproductions of the actual sheets packed with Lionel's products," Many of the sheets have been combined with similar products apparently to avoid repetition. For example, the 394 and the 494 rotary beacon are listed together. A paragraph is added at the end of the 394 to explain the different workings and another illustration shows the 494. Remember that 394 and the 494 used a completely different method to rotate the beacon. In at least one instance, this combining led to an outright falsehood. On page 269, the instructions for the 91 and the 92 circuit breaker were combined. One statement says that both the 91 and 92, "incorporate a bimetallic circuit breaker." This is completely false. The 91 circuit breaker uses a magnetic relay and a plate with adjustable tension for setting the exact point of operation. This method results in a circuit breaker that operates without depending on heat. Its operation is totally different from the 92. The original instructions included this explanation and a wiring diagram. These were not included in the book.

In other cases, it seems as though the editing was done by someone unfamiliar with the material. The second page of the Burro Crane instructions was located over 10 pages away in the instructions for the Rail Diesel car. On page 344 are the instructions for the Father and Son Twin Railroad. This was the 1960 set which offered matching Super O and HO sets. Two additional instruction sheets, made only for that set, are listed in the wrong place.

Special instructions for installing the circus car corral on the elevated Super O layout of the twin set, are included under the Horse and Circus car instructions on page 112. The special trestle parts for the corral were supplied only with the Twin set. The special trestles which accommodated HO track with special footings supplied only with that set and the wiring diagram for that set are on page 114.

After looking at the instructions for the Animated Newsstand on page 208, I noticed that they were incomplete. Then I found that the missing parts of the instructions were instead added to the instructions for the Newsstand with horn or whistle, seven pages back. They don't belong there at all.

The order that items are printed in the book is without order. For example the 6660 and 6670 flatcars with crane

follow the 3545 Monitor car and precede the 3530 Generator Car set. Fortunately, the contents and index help in locating any particular item.

In short, this book provides a great deal of useful information that is not readily available, and certainly not in one place for so little money, but it could have been produced with a little more care and organization. Someone familiar with the instruction sheets should have looked it over before the book went to press. The book has 368 pages, is soft bound, sells for \$14.95 and is available from your local train store or direct from Greenberg by calling toll free, (800) 533-6644.

New Industrial Switchers

The least expensive locos listed in the new catalog are the Industrial Switchers. We've always reviewed the top-of-the-line equipment, and thought maybe we should look at some of the less expensive items. Mark Gordon, #12684, of Lionel reported to us that these switchers have been very well received. We thought we'd take a look.

Photo 19, on page 12, shows the Union Pacific Industrial Switcher. The same loco is available in CSX and Amtrak road names. Although the tooling for these switchers is not new, we did notice that several improvements have been made since this inexpensive switcher was last made. Photo 20 shows a bottom view of the Command Assault switcher made in 1983. Compare this with Photo 21 which shows the new design. Rollers have replaced the sliding contacts on the older model. Also notice that the couplers on the new model have been redesigned to be self centering. The original ones were almost impossible to couple without a helping hand to line up the couplers. Both models have fixed couplers and depend on the car having its coupler open.

Photo 22, on page 12, shows the two switchers. The new model features a bell in place of the diesel horn. Photo 23 is a rear view and here you can see a switch on the left side of the new model. This controls an electronic E-unit, and is used to lock it out if desired.

Photo 24, on page 12, shows the inside of the new model. The motor and drive system are identical to the older one, but the other parts are new. The new model includes an E-unit which also allows the switcher to operate on AC as well as DC voltage. One of the main failings of the older model is that it only operated on DC and would in fact be destroyed if operated on AC. The older model had a piece of half inch thick steel where the E-unit is. The newer model places a thinner weight in the top of the cab, secured with a screw from the outside. The screw securing the weight can be seen in photo 24.

We tried pulling a line of cars with the new switcher and found it did well. In fact, I dare say it would pull many more cars than the old postwar Army and Navy motorized units. The switcher also runs more smoothly and with less noise than the postwar versions. My only complaint is with the light bulb which illuminates the entire front of the switcher. The light from the bulb needs to be masked so that it only shows through the headlight.

Lionel HO Price Guide ?

We had a request from member Don Ward, #12897. Don collects Lionel HO and was wondering if there is available any listing of values for HO items made by Lionel from 1974 to 1977. I checked the guides I have and could find nothing. Are any of our members aware of such a guide? Please let us know. You can reach Don at 4192 Unity Road, in West Union Ohio 45693.

Two New Box Cars

Photo 25, on page 12, is the 1993 Toy Fair Car. These were not yet ready when I took the other Toy Fair photos. This year's car sports Lionel's hopes for the Authorized Value Added Dealer program.

Photo 26 is the limited edition car offered this year by Toys "R" Us. In my area, this car was not available during the holiday season.

That's It For Now

With this issue, you'll receive all the information on this year's LCCA convention in Dearborn. This looks to be one of most memorable conventions. Don't miss the train. Why not make plans to attend. In addition to trains, there are some great attractions in Dearborn. The Henry Ford Museum and Greenfield Village are a must see if you're in the area. Of course a tour of Lionel's manufacturing facilities is not be missed, along with Richard P. Kughn's private museum,

CaRail, and of course Madison Hardware! If you haven't decided to attend, why not consider it. This will be one convention you'll regret not attending. Once you decide to attend, be sure to register as soon as you receive your convention brochure. A word to the wise is sufficient.

If you have a question or comment or anything that might be of interest to the club, and don't have time to write an article yourself, just call me at (201) 358-1955. Evenings are usually best, and calling on weekends will save you money. I'll do the writing and credit the contributor. We'll throw any questions out to the membership and print the response in the following issue.

So let's hear from you, even if its just a suggestion for a topic of discussion. Letters are also welcome of course. Although my busy schedule does not allow a personal reply to every letter, I will try to acknowledge receipt of your letter and let you know the issue in which I expect your comments to appear. If you send a letter, please be sure to include your name and address so that I may get back to you with any questions. I will not publish any anonymous letters. As a matter of policy, you must sign your letter if you expect a response.

Bill Schmeelk
15 Birchwood Lane
Hillsdale, NJ 07642
(201) 358-1955

The LCCA 1993 Annual Convention **July 21-25, 1993 in Dearborn, Michigan**

Bill Button (313) 722-7464 is the Convention host for the LCCA 1993 Annual Convention. The convention will be at the Hyatt Regency Hotel in Dearborn, Michigan. Tours planned include: the Lionel factory, Madison Hardware, Lionel Visitor's Center layout, CaRail (Dick Kughn's private antique auto and toy train museum), the Henry Ford museum and Greenfield village. Registration materials will be included in this issue (April 1993) of *The Lion Roars*. Plan to attend this terrific event.



Photo 19

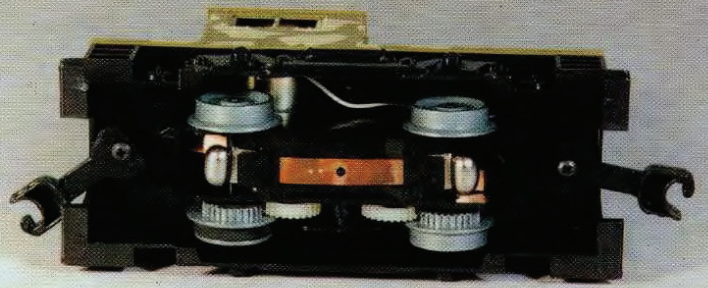


Photo 20

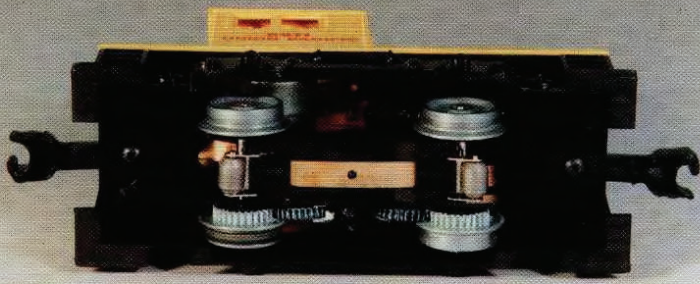


Photo 21

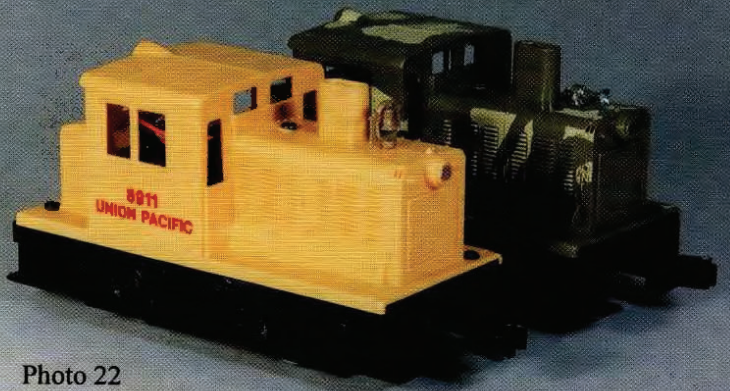


Photo 22

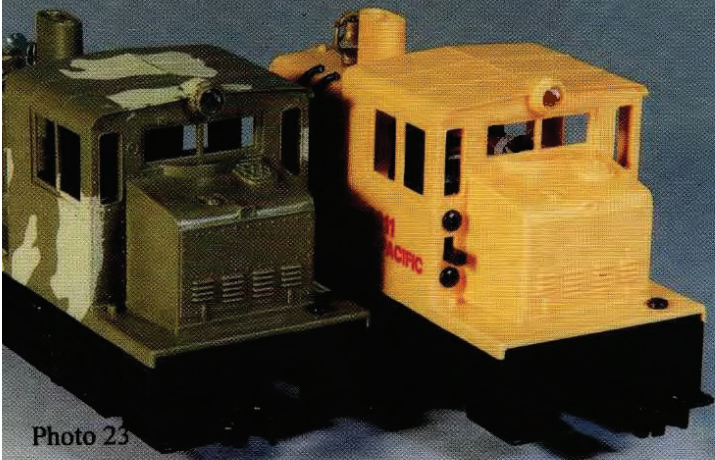


Photo 23

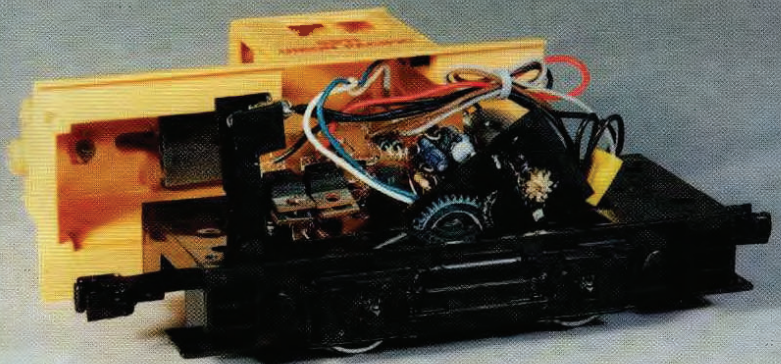


Photo 24



Photo 25



Photo 26

President's Report

As I reported in the October and December 1992 issues of *The Lion Roars*, all plans for the Dearborn 1993 LCCA Convention are right on track. I also told you we need your help and I am again repeating that request. The Dearborn 1993 LCCA Convention will probably be a blow-out. We have no way (at this time) to determine exactly how many members will be in attendance, but based on what we are seeing and hearing, this will be the largest convention in LCCA's history. Attendance at the Orlando 1992 LCCA Convention was approximately 400 members. Our estimate for the Dearborn 1993 LCCA Convention is upward of 1500. The help I am requesting of you is **EARLY, EARLY** registration. Also, remember the tours will be limited to what each tour facility can handle each day. I am afraid we may not be able to handle everyone who wants to go. *Register early – First Come First Served.* Don't be the one who is disappointed.

Let me switch tracks and give you a report on our new membership drive. Last November the Board granted me permission to go forward with a professionally produced, direct mail and advertising program. The Board approved \$75,000 as our budget for the project. The direct mail brochure that was sent to non LCCA members was enclosed with the February 1993 issue of *The Lion Roars* so that you might see what was produced and mailed.

The direct mail program called for two separate mailings. The first mailing of 70,000 brochures went out on December 16, 1992 and the second mailing of approximately 67,000 brochures went out on February 5, 1993. I am pleased to report that to date we have had 2760 new members from the first mailing. Further good news is that the 2760 new members ordered 1232 LCCA 1993 Convention cars. While it is too early to evaluate the progress of the second mailing, we have been advised by our advertising agency to expect an almost equal number of new members as the first mailing.

I welcome all the new members to the club and assure them that we'll do everything possible to live up to your expectations. We solicit your input and hope you will contribute articles to *The Lion Roars*, use *The Interchange Track* to buy/sell/trade trains, find new friends in your area to share the hobby with the LCCA Roster of club members, attend LCCA meets listed in the Upcoming Events and attend the Dearborn 1993 LCCA Convention.

Al Otten

Welcome Aboard New Members

The names of all the new members that have joined the LCCA are normally printed shortly after they join. Because over 3000 new members have joined due to the membership drive, this is not practical. The Roster will be published shortly and will contain an up-to-date listing of all the new members. The names of members that join after the Roster is published will be printed in *The Lion Roars*.

The Back Shop - *Build an O Gauge Thomas the Tank Engine*

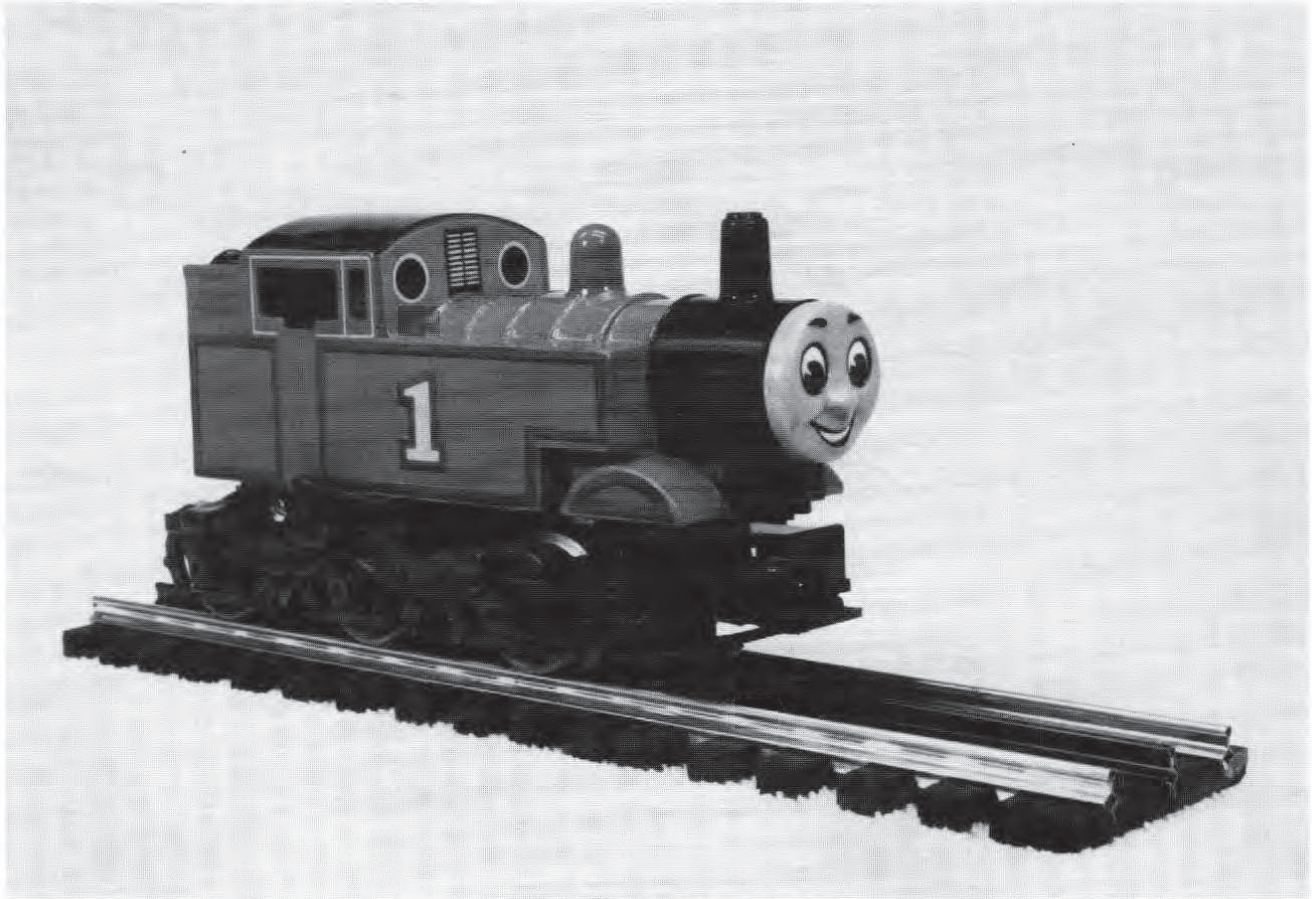


Photo 1 - Thomas the Tank Engine

Last summer, at the Lionel® seminar at the Orlando LCCA convention, the question was asked if Lionel® would consider manufacturing a Thomas the Tank Engine and some of his friends. Now, unless you are a young parent with small children, you probably have no ideal who Thomas is. To put it in a child's perspective, what a Lionel 700E is to an adult; Thomas, the Tank Engine is to a 3-year old. Believe me, with three small boys, I know!

Obviously, Lionel Trains Inc. does listen and recognizes the market potential. As we all read in the February 1993 issue of *The Lion Roars*, Lionel will be offering Thomas the Tank Engine with two passenger coaches, Annie and Clarabel, in Lionel Large Scale.™

But what about us big boys with our O gauge layouts? Well, until Lionel offers one, this article illustrates how to make a Thomas engine for less than \$80.

TOOLS

Basic Hand Tools (screwdrivers, small file)
Dremel® Moto-Tool w/Cutting Disk and 1/16" Grinding Bit
Rubber Band
#2-56 Tap
#43 and #51 Drill Bit
Drill Guide or Press (Not a requirement, but makes it easier.)

The parts list appears at the end of article.

STEP BY STEP

1. Remove the two phillip screws from underneath the Ertl Thomas frame allowing the removal of the wheel supports and the red plastic frame.
2. Using a Dremel® moto-tool with a cutting disk, sever both shell mounting posts flush with the lower body edge. Wrap the post with several layers of masking tape. The tape will aid as a cutting edge guide while sheering the post off. Photo 2 shows this procedure. ***Don't forget to wear Safety Glasses!*** Set the shell aside.

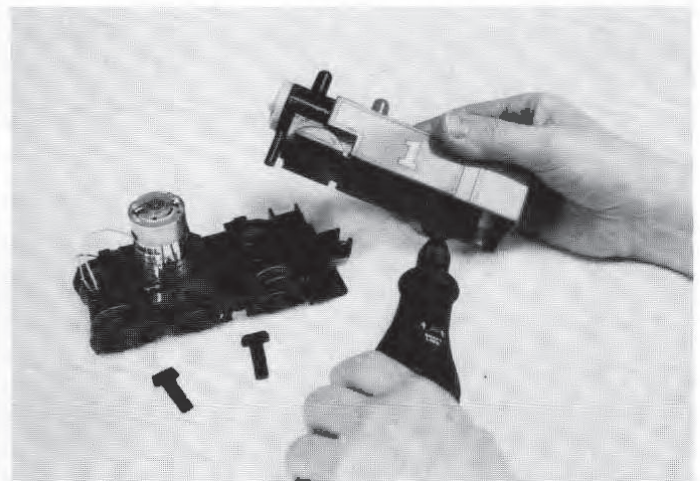


Photo 2

3. Using a pair of pliers pull both locator tabs from the Lionel #610-8810-101, motor truck. (The motor truck is from a SD-18 and its exploded diagram may be found in Lionel's parts supplement S15:1-2.)
4. Remove the front two phillip head screws securing the pilot to the motor frame. Remove pilot and set it aside.
5. Remove the rear pair of phillip head screws, separating the truck side plate from the lower wheel frame assembly.
6. Turn the plastic truck side plate upside down and remove the two #1 phillip head machine screws. Removing these screws will release the motor from the plate. When separating the motor, observe motor relationship to truck plate and if any small washers are present between the plate and motor.
7. Using the moto-tool with a cutting disk, remove the top inside gusset from both sides. Start from the inside and work in layers towards the inside edge. Photo 3 shows this concept.

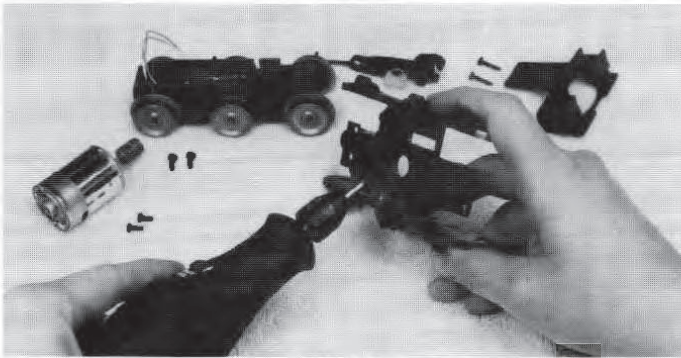


Photo 3

8. Test fit the Thomas shell on top of the truck plate. Chances are it comes close to, but does not fit flush on the truck side frame top. Using a sharp single edge razor blade, score the top and remove this excess using a moto-tool. Approximately 1/16" may need to be removed from each inside edge.

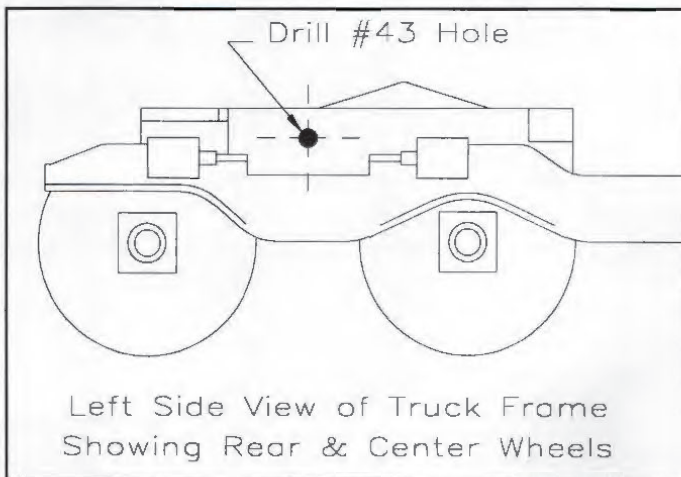


Figure One

9. Using figure one as a guide, score small cross lines on each side of the truck plate. Hole placement is not too critical except for getting it to close to the top. I centered it between the two brake cylinders on the vertical axis and used the top of the brake cylinders as the horizontal axis. Drill a hole at this intersection using a #43 bit (0.089"), one on each side.
10. Sketch an outline of a rectangle on top of the truck side plate. The size of this rectangle should be large enough to allow the small end of the metal locator tab to fit through it. Placement is directly above and centered of the small hole drilled from step #9. The outside edge of the rectangle should be offset inwards just enough to match the thickness of the lower inside wall of the truck side. Using your moto-tool with a 1/16" grinding bit, bore out the rectangle. Clean and do final shaping using small flat and square needle files. Again, the outside edge of the slot should match the underneath inside edge of the plastic truck frame.
11. Using the two locator tabs that were removed earlier, drill a #51 (0.067") hole approximately 1/8" from the narrow end and center on the opposite axis. Tap holes using a #2-56 tap. Photo 4 shows the modified truck plate and locator tabs with the tapped #2-56 hole.

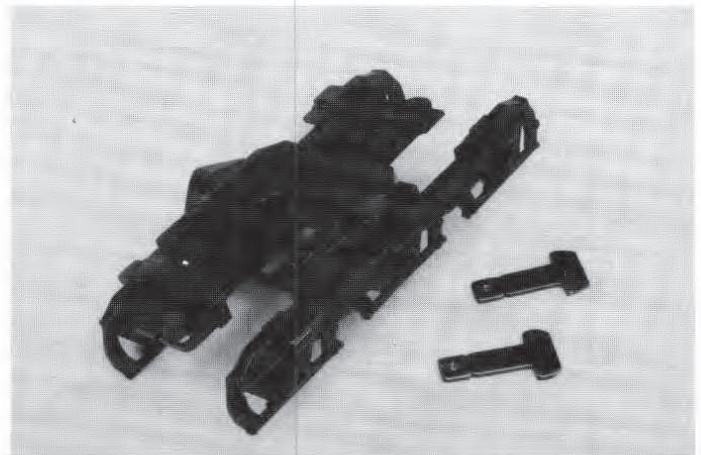


Photo 4

12. Attach the locator tabs to the plastic truck frame using a #2-56x 1/4" machine screw. To compensate for the slightly larger engine shell and a vertical bow in the truck side frame add a #2 metal washer between the truck frame and tab. Align tabs so that they are perpendicular to the top of the truck frame.
13. Remount the DC can motor, making sure it is reattached with any metal washers as it was removed. Photo 5, on the next page, shows the finished assembly.
14. Place shell over frame and position it so that the motor case is almost touching the front wall of the cab. Check frame for overall fit and position. Make a mental note of its position and remove shell.

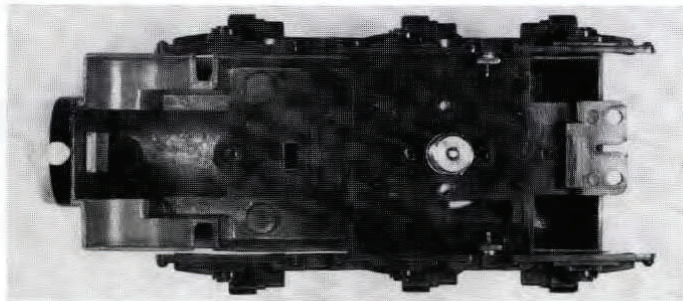


Photo 5

15. Using a small amount of epoxy, apply to outside edge of both tabs. Only coat the upper 2/3's of the locator tabs, so that the epoxy does not smear itself to the plastic truck frame.
16. Apply a small amount of outward pressure to the bottom of the truck sides, arcing the metal tabs inwards. This action will help keep the epoxy from prematurely touching the shell walls. Place engine shell on truck frame, align and clamp into place using a rubber band. Let dry overnight.
17. When the epoxy has cured, remove the rubber band and both #2-56 screws. Separate the shell from the truck plate. Reassemble the motor truck. Remember, the long screws go on the front end holding the pilot.
18. Before we mount the Lionel #600-0103-001, Electronic E-Unit, let's take a few minutes and study its wiring. Position the circuit board so you can read the lettering on the component side. Identify the six wires and their "W" number using the below chart.

W	Color	Function
1	Brown	AC Input - to Yellow truck wire (Ground)
2	Gray	AC Input - to Blue truck wire (PU Roller)
3	Black	To DC Motor
4	Red	To DC Motor
5	Blue	Directional Lockout Switch (not used)
6	White	Directional Lockout Switch (not used)

Typically the blue and white wires (W5 & W6) would go to a SPDT slide switch. Depending on the position of this switch, if the switch is closed (i.e., wires connected together), the electronic E-unit would lock itself in a single directional state (forward, neutral or reverse). Not needing this, I unsoldered the blue and white wires.

19. Cover the metal tabs on the four power transistors located on the upper left side of the circuit board with a piece of electrical tape.
20. If you have a 2 1/2" length of 3" diameter heat shrink tubing, place the electronic E-unit inside, apply heat and shrink the tubing around the E-unit just enough to keep it from sliding. For the rest of us, we will need to fabricate an insulated box from a sheet of flypaper or thin cardboard. Without this, the circuit board would short out against the metal shell. Cut out a piece as shown in figure two.

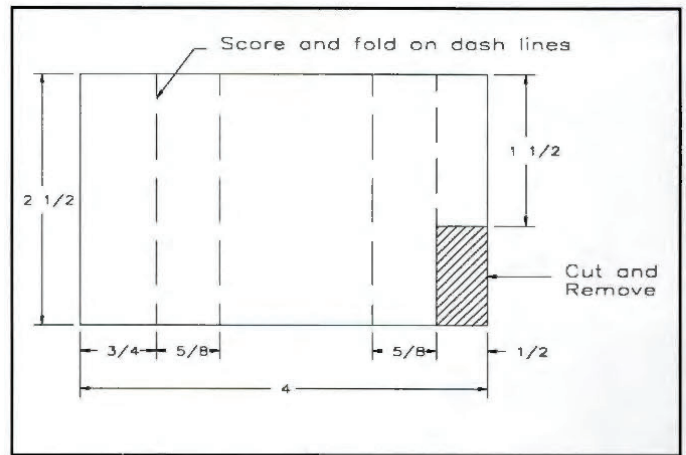


Figure Two

- a.) Cut out a piece having an overall size of 4" by 2.5"
- b.) Measure and mark the inside lines as indicated.
- c.) Score the four vertical line lightly using a razor blade or other knife blade.
- d.) Cut & remove the piece from the lower right corner.
- e.) Fold cardboard down over the edge of your table on the four scored lines.

Photo 6 shows the piece of cardboard and the wiring of the electronic E-unit.

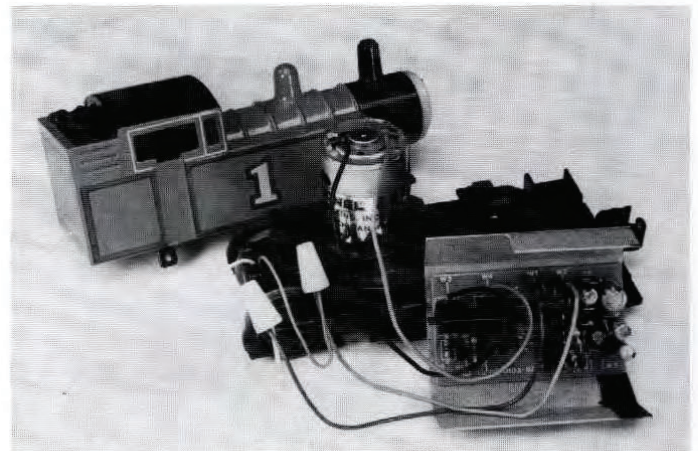


Photo 6

21. Place the electronic E-unit inside the cardboard with the cut out corner on the left. Run all wires out from the left side. Fold the short flap on top of the longer bottom flap and check for proper fit.
22. For appearance purposes, use a permanent black marker and darken the bottom and lower sides as well as the front side of the cardboard sleeve.
23. Solder the red and black wires to the motor terminals.
24. Using two small wire nuts tie together the brown and yellow, and the gray and blue wires.
25. Place the wrapped electronic E-unit inside the boiler. Tuck wire along and around the side. Slip shell over truck frame and attach using the #2-56 machine screws. If needed to keep the truck sides from touching the wheels, insert the #2 metal washer between locator tab and frame.

PARTS LIST

<i>Quantity</i>	<i>Description</i>		<i>Price</i>
1 -	Ertl #4082	Thomas, the Tank Engine.	Available from most toy stores (I purchased mine from Toys 'R' Us)
1 -	Lionel #600-0103-100	Electronic E-Unit	\$11.00
1 -	Lionel #610-8810-101	SD-18 Motor Truck, Blue Truck Frame	\$25.00
2 -	Small Wire Nuts		\$40.00
1 -	4" x 2 1/2" Thin Cardboard		
2 -	#2-56 x 1/4" Machine Screws		
2 -	#2 Metal Washers		
	Epoxy Glue		

FINALE

Test run engine, place back in box and wrap with suitable gift paper. Give engine to grandson or nephew. Or run on your layout when they come to visit.

method. An F3 dummy coupler could be used as a coupler by fabricating a metal plate and attaching this assembly to the rear truck screws.

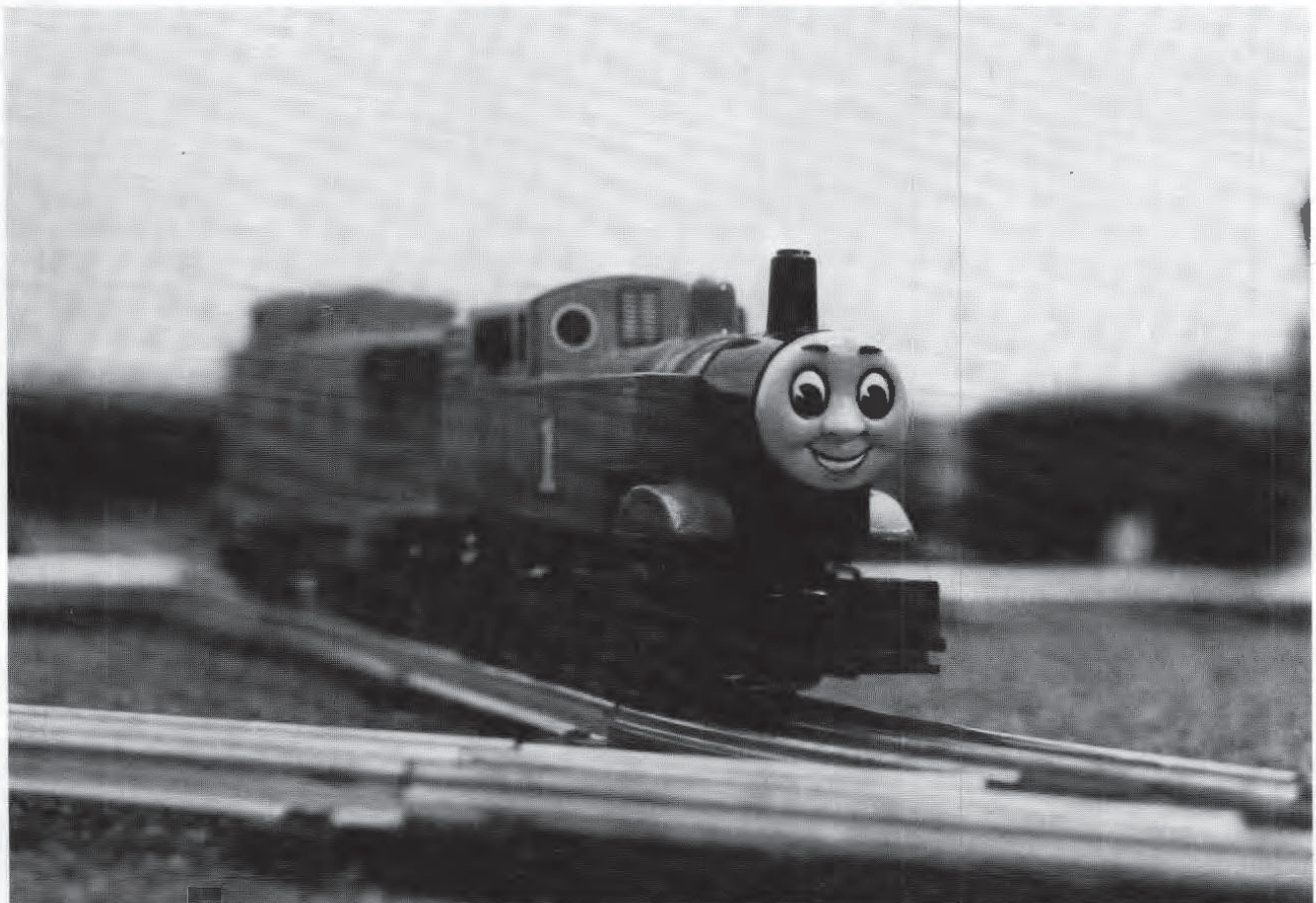
Take a hint from Thomas the Tank Engine... *SMILE!*

TWO QUICK COMMENTS

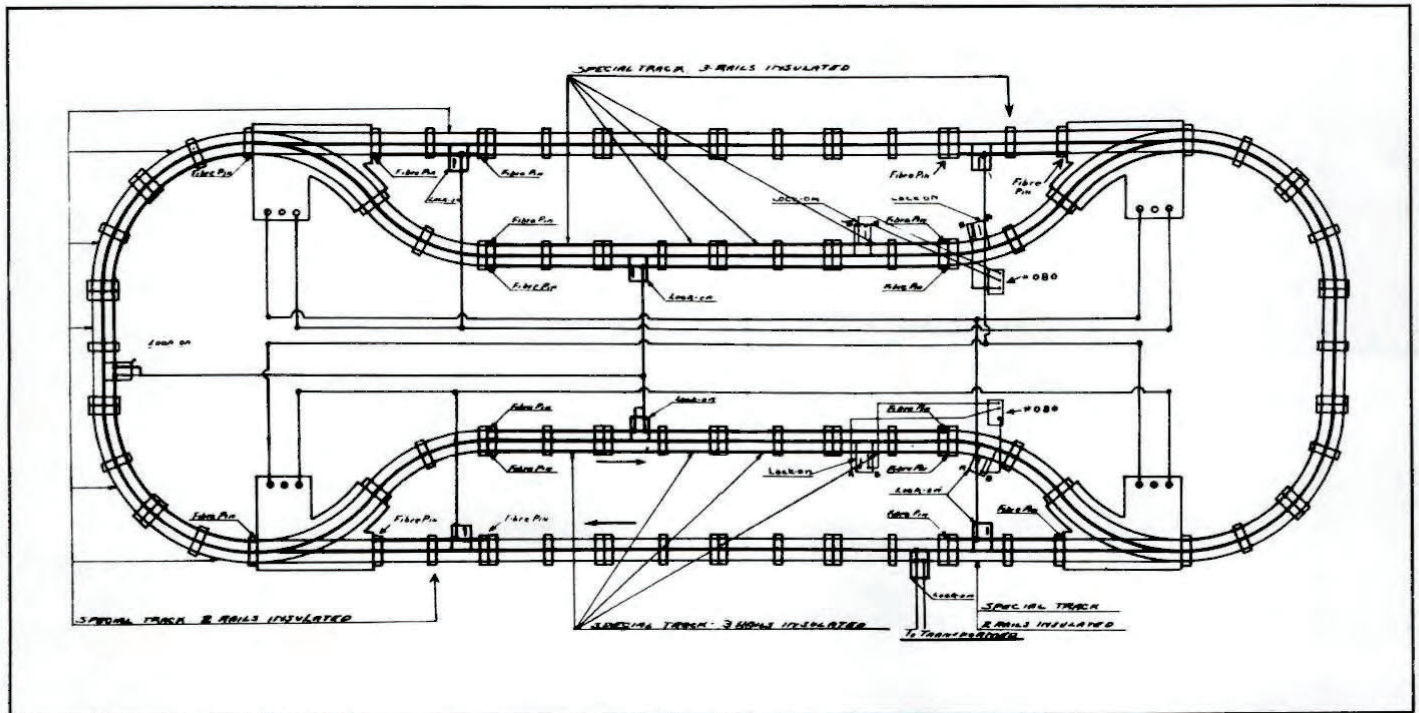
Notice that traction tires are used on the geared wheel side. Running engine over an insulated track section, remote switch and crossover may cause engine to stop!

Although Thomas lacks a rear coupler, provisions for fabricating one should not pose too great of a challenge. Access to the rear truck screws provide a simple mounting

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 Springfield, IL 62704
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 (217) 787-4855 -- Work
 (217) 787-4865 -- Fax



INTERESTING TRACK LAYOUTS



Two Trains Running In Opposite Directions

A layout using four switches can be made to operate automatically two trains at the same time as shown in these plans.

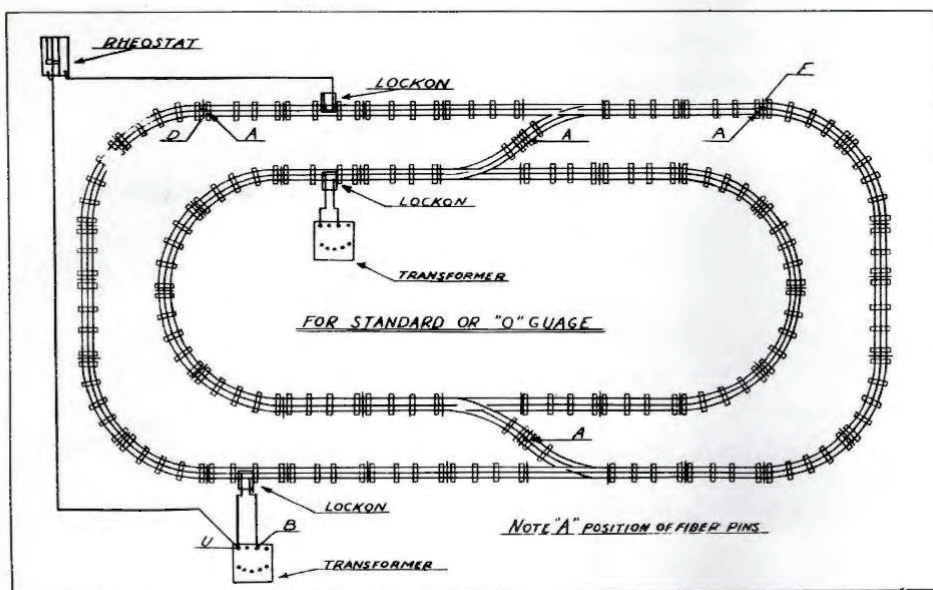
Starting with two trains on the bottom tracks, each headed in the direction of the arrow, the train on the lower track will move first. It will circle around the left hand loop, enter the

siding at the top and stop.

Meanwhile the second train will leave the bottom siding, circle around the loop on the right and run to the left along the main straight track on the top without stopping. After it has cleared the upper right hand switch the first train, which has been waiting, will again proceed to the main

track on the bottom, but before it gets there the second train will have reached the bottom side track and stopped.

There are several points to be noted. This layout will not make the trains perform properly unless fibre pins and special insulated track are correctly placed and wired as shown.

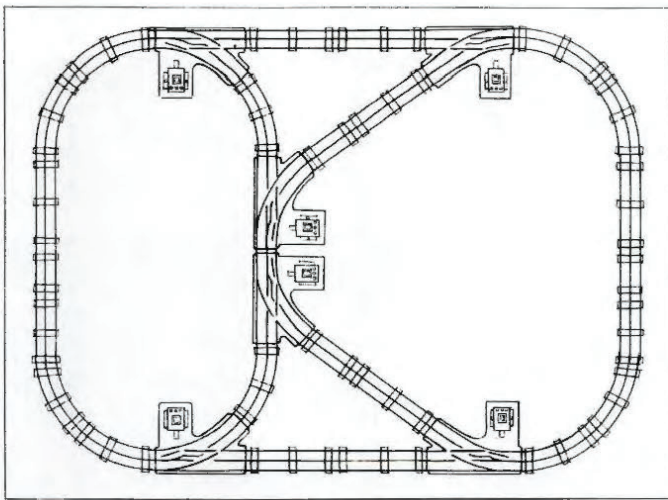


Two Trains Running Independently

Two operators each run one train independently of the other, and occasionally switch it to the other fellow's territory.

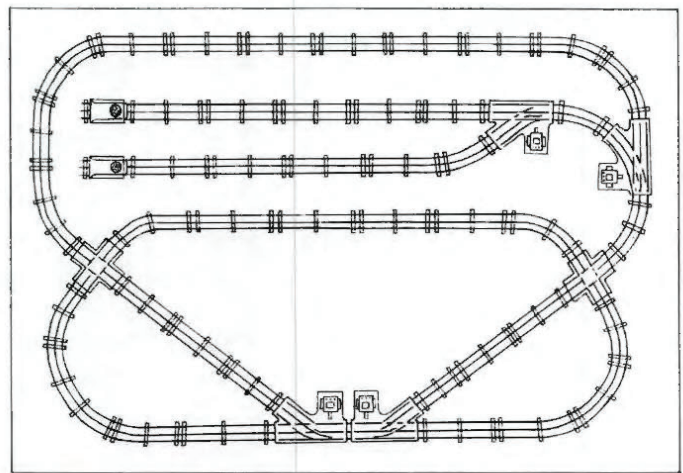
Notice there are four fibre pins used to sectionalize the third rail at points marked A. The other two pins D and E permit control of a train between those points by the rheostat when it is desired to switch from the inside to the outside loop.

Suppose each train is running around a loop in a clockwise direction and the operator of the inside loop wants to switch to the outside loop. He stops his train at the top cross-over and waits until the other train has passed, then follows it.



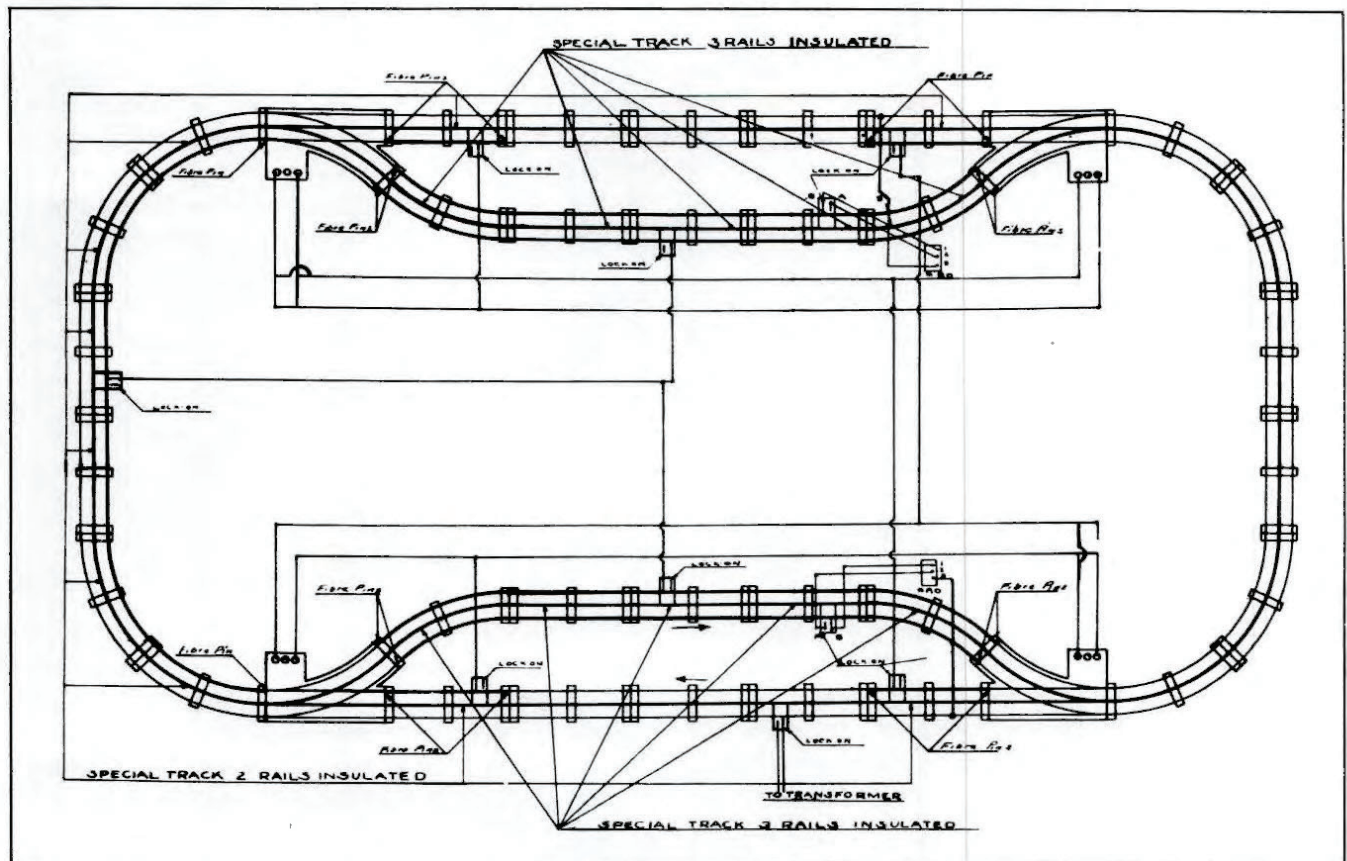
Making Good Use of Small Space

Here is an interesting "O" Gauge layout of track for boys whose systems are confined to a small amount of space. It illustrates how two "Y" switches can be employed. The layout is big enough to accommodate two trains in simultaneous operation. If this layout is to be used for Standard Gauge, it is necessary to lessen the sharpness of curves by adding straight track. The following equipment is used in this layout: ten sections of straight track, four half-sections, ten sections of curved track and six switches.



Storage Yard For Small Layout

It will take perfect timing to keep two trains in operation on this layout at a single time. But there is a lot of interesting action possible in switching trains from the lower to the upper loop. The layout can be formed with sixteen sections of curved track, twenty-two sections of straight track, four half-sections, two bumpers, two crossings and three pairs of switches, although it is advisable to make the curves more gradual with more straight track.



Layout For Operating Two Standard Gauge Trains

Operation of the trains and the wiring for this Standard Gauge railroad are similar to that of the "O" gauge layout shown at the top of the preceding page.

Trains run in opposite directions. Start each train as indicated and it

will run continuously, automatically side-tracking to avoid the other.

Note that the track at each end of the sidings is connected to switches with fibre pins in both inside and outside rails. The loop on the left is composed entirely of track having two in-

ulated rails.

Great care should be taken in constructing this layout to be sure all fibre pins are correctly located, and all wires and lockons are placed exactly where shown. One mistake would spoil the entire operation.

The Three Rail Rambler

A Rambler welcome from the LCCA to all of you new members. We are glad you joined us. Do not hesitate to contact any of our elected or appointed official types if you have any questions or problems related to LCCA. And we hope you'll have a good time, make some new friends and maybe even buy a train and collect it.

Oddball of the Month

This category returns for a look at a factory boo-boo from the prime time of postwar nostalgia. In light of all the press Lionel® gets for coupler failure and other miscues it is instructive to look back at what occasionally befell Big No. 1 in the fabulous fifties. Take a close look at the upside down coupler on the 6352-25 in photo 1. They assembled that one on a Monday or a Friday.

Which Locomotive is BEST?

This edition of the *Rambler* re-opens the ages old boyhood debate over which toy locomotive, or semi-scale one for that matter, is "best." But this time instead of punching out the kid who got that twin diesel your family couldn't afford, write, call, or catch the Rambler at a meet and express your opinion. The Rambler will keep up totals and with permission quote some responses in this column.

To maintain impartiality the Rambler will not vote. All LCCA members are eligible. We do request that any member also involved in the production, distribution, or retailing of trains identify themselves appropriately. Your vote counts, of course, but its important to know your bias. And if you work there you should be biased.

Be sure to sign your comments and include your membership number and phone number. One final warning – Do NOT allow anything you read, especially in this column, to influence you. Vote with your heart, your mind and a No. 2 pencil. Let the mayhem commence!

Not Seen at Toy Fair

We close with a few photos of prototype items that did not make it to Toy Fair this year. These items were developed behind closed doors and even the pictures were meant for "internal use only." How they wound up in a file folder in a blue desk in Dixie (sounds like a song) is another story. Remember, as you look at the pictures and read the captions that the producer of these items is NOT identified. That's to protect the innocent and avoid embarrassing the producer. He/she/they shall remain nameless, fameless and shameless. These, as we said, were NOT seen at Toy Fair.

- Fuzzy Philosophy Think Tank – Comes filled with ideas so clear you can see through them. The car is unlettered, which is appropriate for its contents. See photo 2.
- Depressed Center Cabin Car – Was to have been part of Paul Bunyan Frontier set, but semi-scale pancakes would not fit on currently available flat cars. See photo 3.

- Midnite Dumper Chemical Co. tank car – Simulate a hazardous material spill on your layout. This operating car set would have included a quart of used motor oil, a box of powdered detergent for clean up and the EPA's phone number. This set did NOT make it to Toy Fair. See photo 4.
- Alco B-unit – Don't go running for your catalogs; we all saw the Erie model on page 16. This baby has a motor and will pull two or three dozen of those new ones. Coupled and cabled to its matching A-unit, not shown, it oughta pull the rubber tires right off of the competition. See photo 5.
- All-Scale Hopper – HO scale in length, S scale in width, and sporting a not-to-scale price tag, this hopper runs on 027 gauge track. This car is pictured with an ancient ancestor. See photo 6.

And last? A Railway Express car to help haul all the intentionally misdirected mail with you-know-who on the stamp. This commemorative was to have honored the guy whose influence and music helped seduce a couple of generations of pre-teenagers away from their Lionels and into the realm of drive-in theaters, noisy automobiles and too-tight clothes. When the kids finally came up for air, mom had cleaned out the attic and given away the trains. See photo 7.

Again- these are items NOT seen at Toy Fair 1993. See you at the LCCA Convention. Register EARLY. *And that's NO April fool.*

Down the Road

Stay tuned for the following topics:

- Kiss the F-3 Good-bye
- Rare Lionel paper
- The Melvin Wessel train display

John William Coniglio, LCCA #4891, is *the* Three Rail Rambler. Contact him at: The Three Rail Rambler, P.O. Box 6312, Chattanooga, TN 37401. Phone is (615) 843-2360 before 10:30 P.M. Eastern. Please do not call collect, not even train collect. Especially not train collect. Happy Ramblin' —.

The Rambler





Photo 1

Photo 2

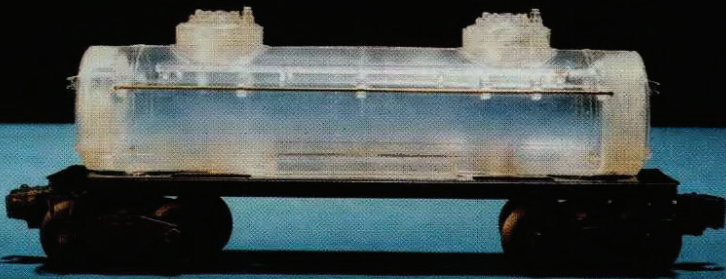


Photo 3

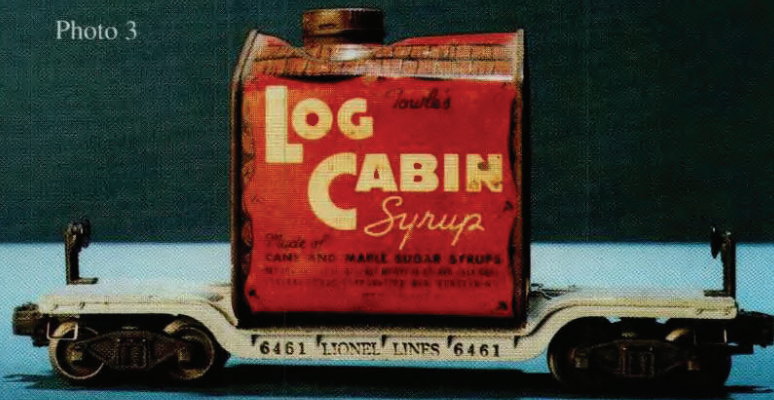


Photo 4

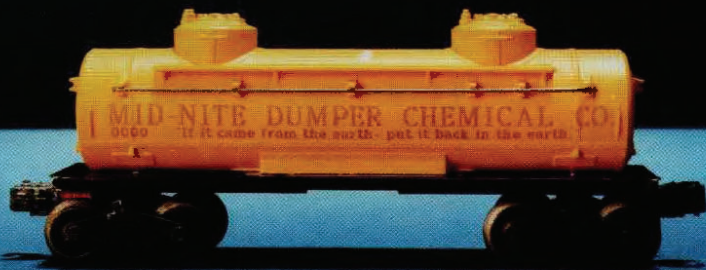


Photo 5



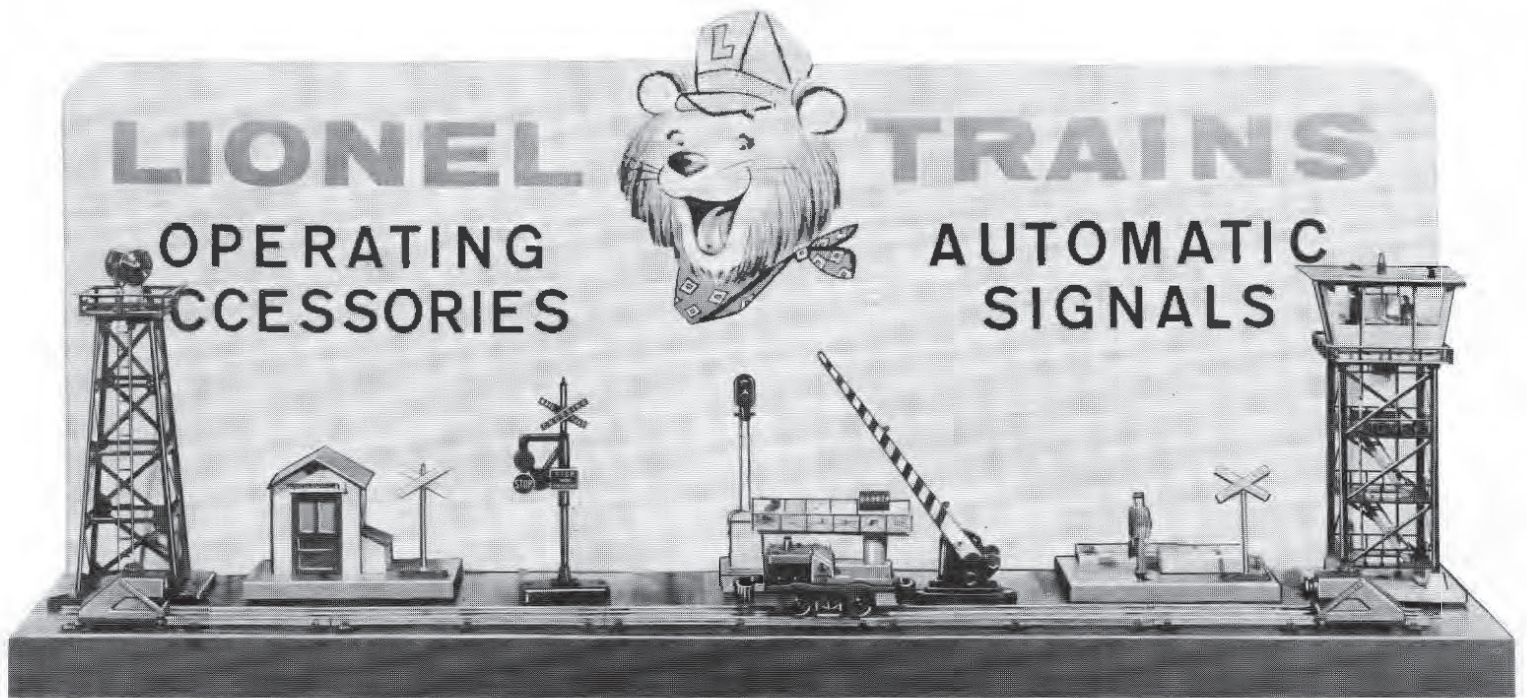
Photo 6



Photo 7



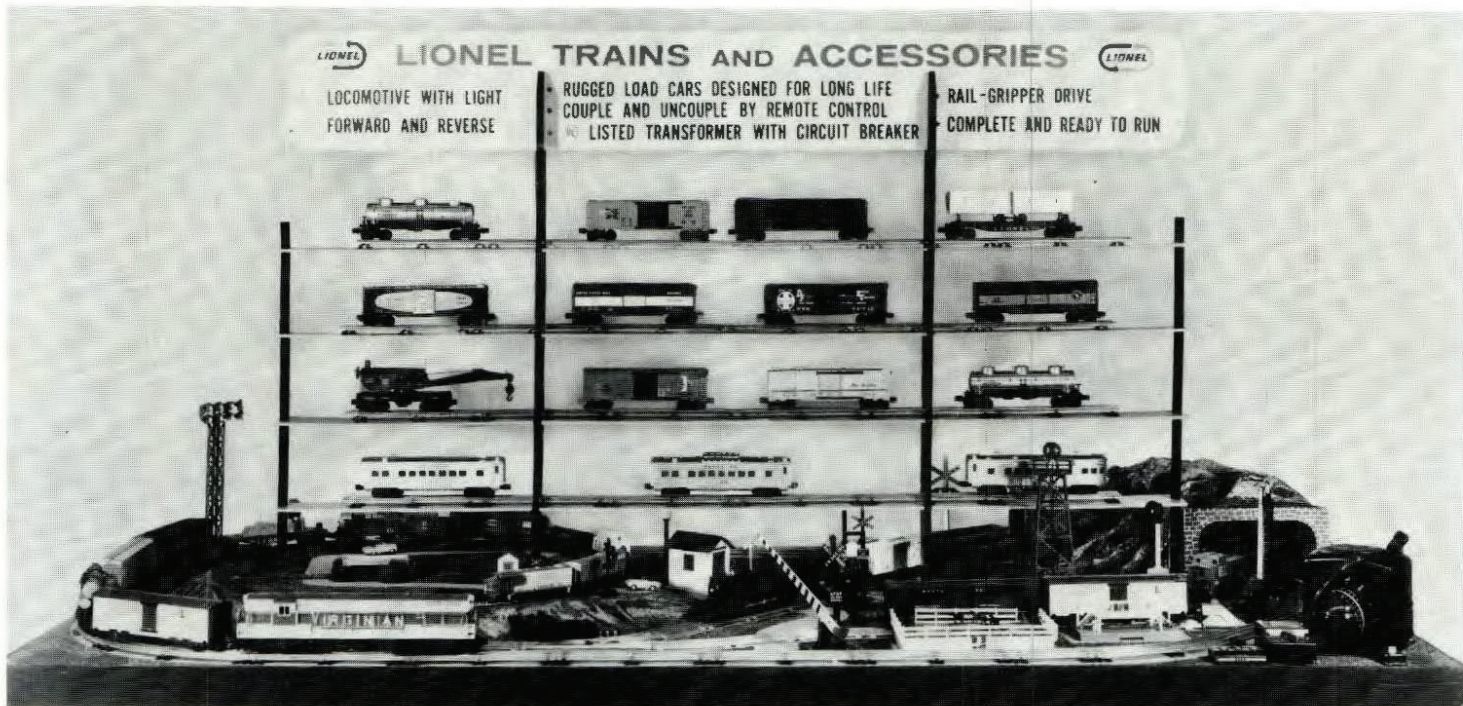
Lionel® Dealer Displays



Lionel D-287 Dealer Display, 1960

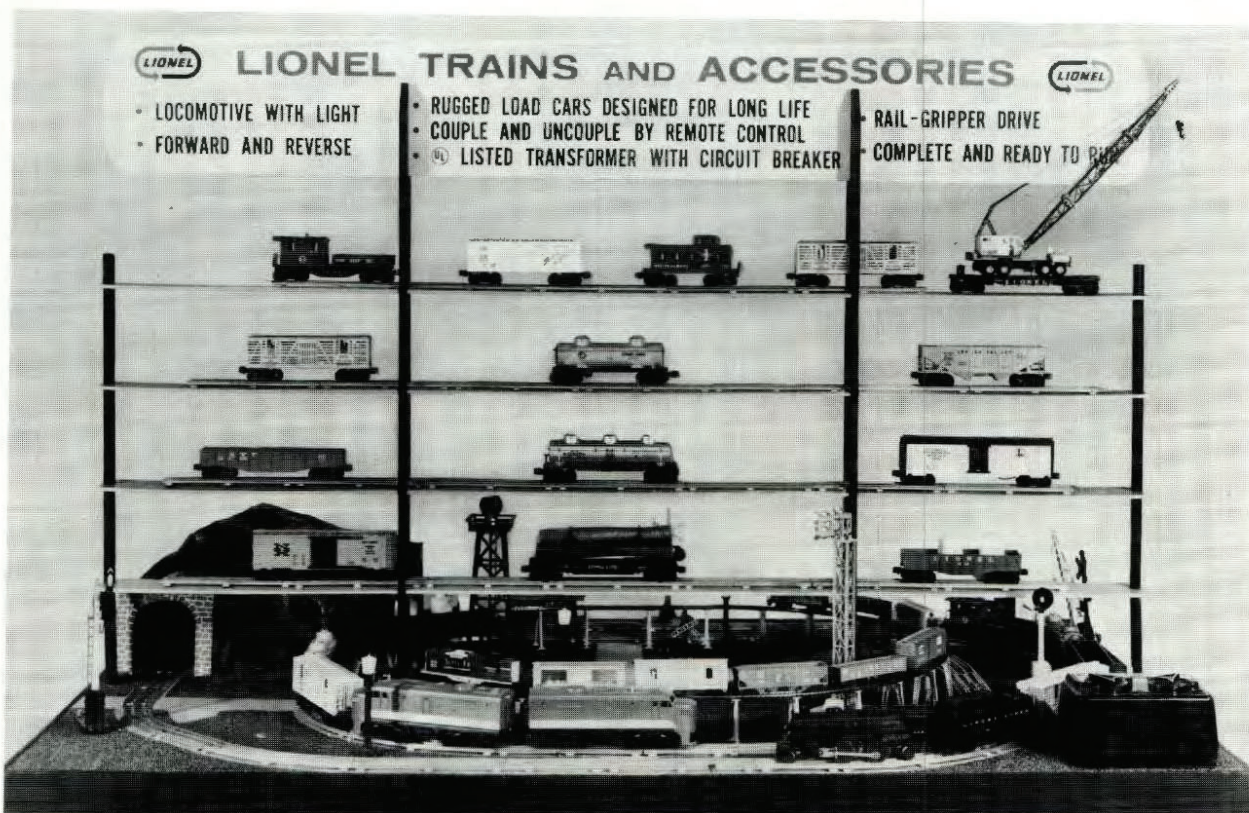
Lionel D-221 Dealer Display, 1961





Lionel DO-504 Dealer Display, 1966

Lionel DO-503 Dealer Display, 1966



Lionel® Allis Chalmers Scraper and Bulldozer loads

First introduced in 1959, the No. 6816 flatcar with a bulldozer and the No. 6817 flatcar with a scraper became two of the most collectible cars of the Lionel postwar era. The No. 6816 bulldozer flatcar was catalogued for two years from 1959 to 1960. The No. 6817 scraper flatcar was catalogued for three years from 1959 to 1961. During this time, the No. 6816 bulldozer was also included in two sets. Only one 1960 set, the No. 1639WS, included both flatcars.

Both the bulldozer and scraper were also available for sale separately. The bulldozer was sold in an orange picture box marked 6816-100. The scraper was available two different ways. First, it came in a white generic box with the number 6817-100 on it. Second, it is also known to have come in an orange box, but this I have never seen.

The Lionel bulldozer is a very good model of an Allis Chalmers HD-16 diesel bulldozer. It is quite fragile and the hydraulic struts on the front blade are often missing or broken, as is the smoke stack. Bulldozers come in the two distinctly different colors of orange and the rare pale light orange. The orange color also comes in a dark orange shade.

The color of the lettering on the back of the seat of the bulldozer is either black or white as shown in photo 1. The length of the hitch is longer on some models and the longer hitches have a small hole in them. This can be seen on the middle bulldozer in photo 1. Some bulldozers have the words "HD-16" and "Torque Converter" on the side of the seats, while other have only the words "Torque Converter."

The flatcar itself came in two colors, red and the scarcer black. The red molded cars came in either 4624-11 or the 6511-2 mold, while the black came in the 6424-11 mold.

The earth scraper is also a very good model of an Allis Chalmers scraper. Like the bulldozer, the hydraulic struts and the hitch pin are often broken. The smoke stack which is very fragile, is almost always broken. There are two

distinctly different body fronts on the tractors. This is shown in photo 2. The scarcer tractor on the left in photo 2 has a wire windshield and the words "Allis Chalmers" in white on the trailer and in black lettering on the tractor. The more common version is missing all these features. The flatcar itself came in two colors, red and the rare black. The red molded cars came in either the 6424-11 or the 6511-2 mold, while the black came in the 6224-11 mold.

If any club members have any other variations of either the bulldozer, scraper, flatcar or the orange box for the 6817-100, I would like to hear from you.

Barry Keener

Photos 1 to 4 by Barry Keener

Photos 5 and 6 by Rob Kinsey

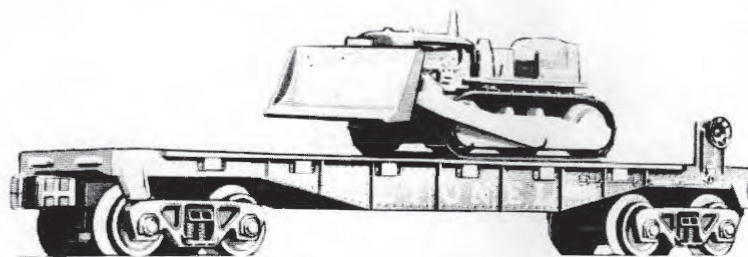
Bulldozer Variations

Color	Hitch	Lettering Color	HD-16
light orange	short	black	yes
dark orange	long	white	no
dark orange	short	white	yes
dark orange	long	white	yes

Scraper Variations

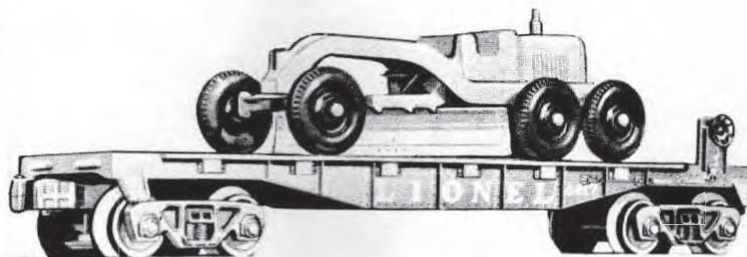
Color	Windshield	Lettering Color
dark orange	wire	black
dark orange	wire	white
dark orange	none	none

Note: These are the known bulldozer and scraper variations. Others may exist, but these are the only ones I know of.



NEW! No. 6816 Flat Car with Bulldozer— This 11" long flat car carries a model of the Allis Chalmers HD 16 diesel bulldozer vital to the road building program. Bulldozers like these push aside large trees and level huge mounds of earth. \$5.95

NEW! No. 6817 Flat Car with Earth Scraper—A model of the Allis Chalmers TS-260 motor scraper is carried on this 11" long flat car. Machines like these are used to move piles of earth, level terrain. \$5.95



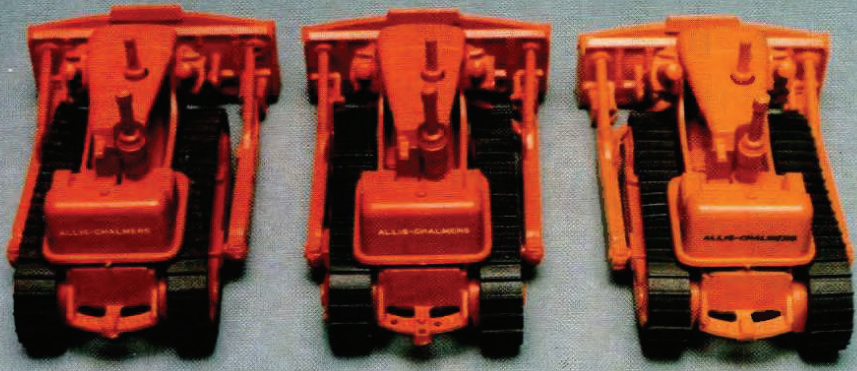


Photo 1 - Allis Chalmers Bulldozers

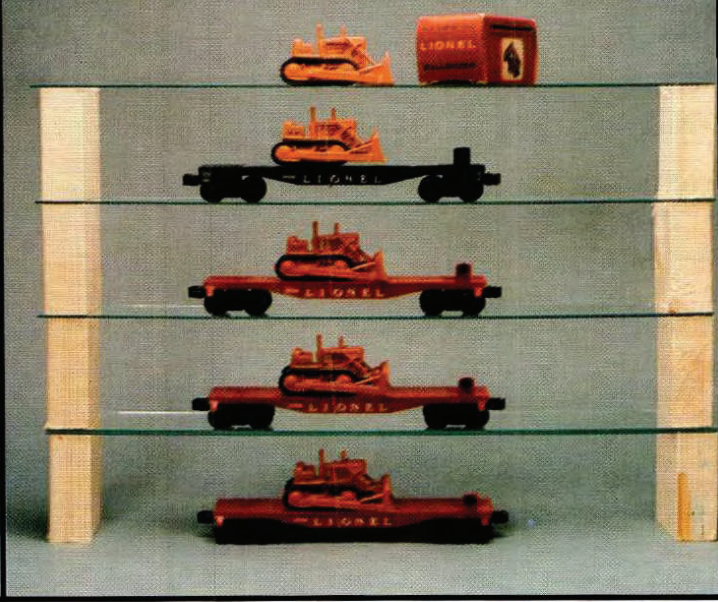


Photo 3 - Bulldozers on No. 6816 flatcars

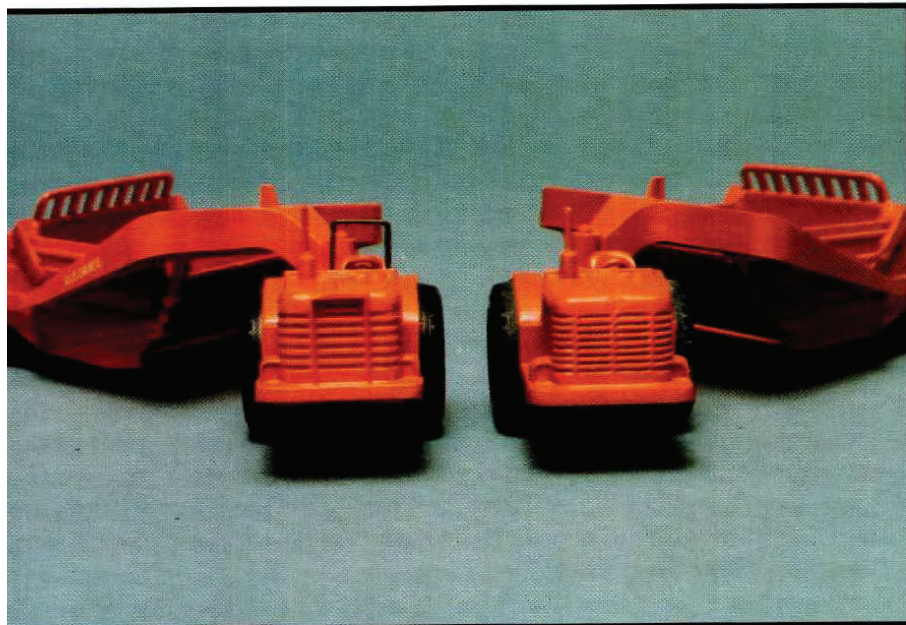


Photo 2 - Allis Chalmers Scrapers

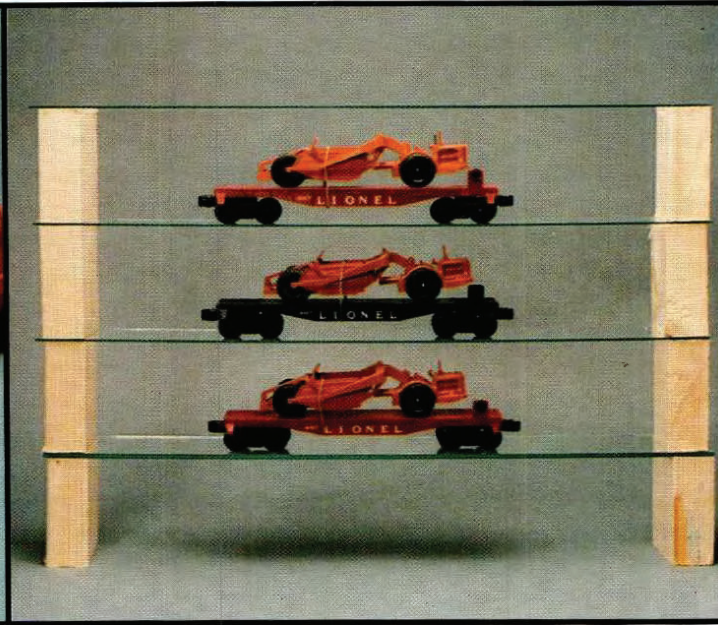


Photo 4 - Scrapers on No. 6817 flatcars

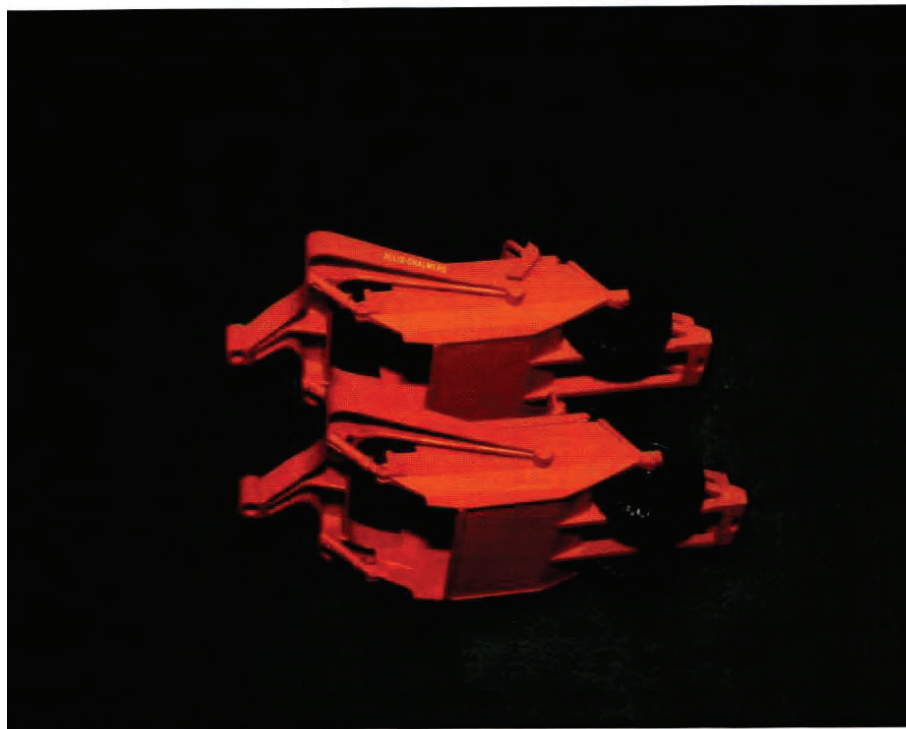


Photo 5 - Scrapers with white and no lettering

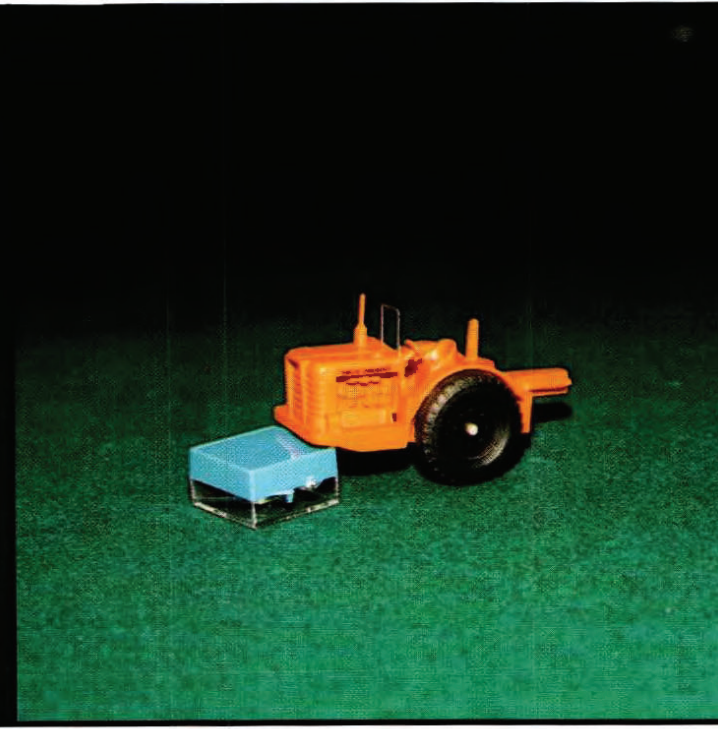


Photo 6 - Scraper with wire windshield

Don't Replace It, Repair It!



The Restored 249E loco.

Sometime ago, in the August 1989 *The Lion Roars* on page 15, I described a method for gently straightening a pre-war cast frame. In that article I promised I'd write again and describe how I repaired a broken pilot. I'll make good on that promise.

The 249E (a bag of parts) I was given had a serious bend in the frame (we fixed that in the last discussion), but also had three of the vertical spokes of the pilot broken along with the lower horizontal piece connecting them. Unfortunately none of the pieces came with the bag of parts.

I would have preferred to repair the pilot using metal of some sort but I could not imagine any method which would give a strong bond of the new metal with the existing broken part. My auto body repair experience gave me a good background in working with plastic auto body filler Bondo™ and I finally decided to attempt a repair using that substance. Bondo is tough and is still relatively easy to work, especially immediately after it ceases to be pliable. If you wait till it is hard it becomes very difficult to work! *See the Note on Epoxy Alternative at the end of this article. As I later discovered Epoxy works better than Bondo.*

However, Bondo is rather brittle and only works on autos because it is bonded to the sheet metal surface of the body. As a result I felt that the Bondo would be quite delicate without some method of making it a little more rigid. I solved this problem by reinforcing it with metal much as concrete is reinforced with steel bars.

The first step is to use a paper clip to construct a steel reinforcing matrix and bond it permanently to the broken pilot casting. Use a drill bit slightly larger than the paper clip. My paper clip was .040" in diameter so I used a #54 drill bit. Drill holes about 1/8" deep into the center of each of the broken stubs of the pilot casting. See figure 1.

Next take a piece of the paper clip and bend a 90 degree angle in it and cut it to fit into the lower hole and the hole at the outer end of the pilot beam. See figure 2. Be careful to make this piece of reinforcing metal just long enough that it will be at the center of your new pilot casting. When this piece is cut to the proper length and fits correctly remove it and place a small drop of ACC (alpha cyanoacrylate adhesive - Crazy Glue or Super Jet, available from your local hobby shop) on each end of the 90 degree angled piece. Insert it carefully into the drilled holes and before the cement has cured bend the metal piece to the final correct shape.

Look at it from the side to insure that the vertical section is truly vertical.

Next place a short piece of the paper clip up into any of the remaining holes and mark the point at which it crosses the horizontal piece we just glued in place. Remove the new piece from the hole and using your pliers bend a small "U" that will fit over the horizontal piece. See figure 3.

With your snippers clip the new wire just above the bent up part of the "U", put a small drop of ACC on the plain end and press it into the hole in the broken pilot engaging the "U" with the horizontal portion of the 90 degree wire. Using your pliers, close the "U" around the horizontal part of the 90 degree wire and form the new vertical wire until it is truly vertical.

When you are satisfied that it is, place a small drop of ACC in the eyelet formed from the "U" to bond the vertical to the horizontal. Repeat this "fit and bond" sequence for any remaining verticals that are missing from your pilot and you will have created a steel reinforcing matrix that will give strength to your new pilot casting. Your work should now resemble figure 4.

Our second step is to use card stock (index cards or old calling cards work perfectly) cut into small shapes to construct a series of "fences" which will form a complete mold for the new casting. My suggestion is to make the small pieces that will form the spaces between verticals first. See figure 5.

Use a steel rule to fold the card in order to produce sharp folds. Test your first product by slipping it into a space between two good pilot spokes. If it won't slip smoothly between two spokes throw it away and make another. When you have the number of good spacers you need use transparent tape to secure them in place from behind, inside the pilot, see figure 6.

When all the spacers are in place the only thing that remains is to create the outer strips of the mold. This is a straight forward "cut and fold" operation and you should have no trouble with it. Study figures 7 and 8 and you'll get the idea. Use bits of transparent tape if necessary to secure parts of the mold in place.

Please note that if your mold isn't perfect the first generation casting can be corrected with small applications of additional Bondo or it can be cut or filed to the final desired contour. In addition, if you are unsatisfied with your first attempt at building the mold rip it off and start again. It's easier to do that than to struggle with a really bad casting.

Next is the moment you've been waiting for, mix up a small amount of Bondo and slap it into the mold! Remove the amount of the Bondo material that you think the mold will hold. In repairing a pilot casting this won't be much material. Place the Bondo on a clean piece of cardboard as a mixing palette. I use anything at hand from the garbage can or index cards and put a very small dab of hardener onto the top of the little pile of Bondo.

Using a small screwdriver or a small stick, mix the Bondo and hardener thoroughly until it is a uniform pink color. If you have never used Bondo before you will probably use far too much hardener the first few times and the Bondo will begin to harden before you have placed it into the mold. The amount of hardener should only give the gray Bondo a slight pink tint. Use about one part of hardener to about 50 parts of Bondo.

Yes, I know that's almost impossible to estimate using this small amount, but you'll get the hang of it quickly. Your Bondo mix should be workable for about 2 to 4 minutes depending on the amount of hardener you used and the temperature at which you are working. By the way, as soon as the Bondo starts to cure (ceases to spread like soft butter) throw it away and make a new mix, it is a waste of your time to try to get any good out of the stuff when it starts to go. Just scrape it off the palette (if you want to reuse the cardboard) or throw the cardboard away.

Now that we have a small amount of newly mixed Bondo on the palette, take a small screwdriver and pick up a small amount and force it into the mold past the wire matrix into a deep corner. You are trying to force it into the corners so that all air bubbles will be eliminated. Pick up more and keep doing this until you have filled the mold, used the whole charge or until it starts to harden.

Clean your screwdriver with a paper towel and mix more (if needed). Continue until your mold is completely filled level with the sides of your paper form. When you have applied the last of the Bondo use your screwdriver to "tool" the outer surface to the smoothest finish you can, this will save you finishing work later.

What you should have at this point should, at least approximately, resemble the pilot you are trying to cast. Wait about 10 minutes for the last of the Bondo to cure and carefully trim away your beautifully constructed mold and throw it into the garbage. All that struggling and it gets thrown into the garbage! Now, before the Bondo has a chance to become rock hard take your X-acto® knife with a number 11 blade and carefully dress all surfaces of the new pilot material until it is smooth and as close to the final shape and size as you can make it.

If you trim too much or if you have air bubbles, mix more Bondo and very carefully trowel small amounts into the bubbles and onto the places that are too small. If your casting is still too large trim more and when you are very close to final size let it cure for 30 minutes and file or sand to final finish and shape.

Use your pattern files or fine sandpaper (150 or 180 grit at least) cut into small pieces folded around a thin screwdriver blade or a narrow 6" scale and file or sand between the spokes of the pilot and on the outside surfaces. Sand until you have a pleasing finish and until the shape is precisely like the original. You now have a steel reinforced plastic pilot casting that, when painted, will be impossible to tell from the original.

Now all you have to do is prime and paint your newly repaired frame and it is ready to go back to work.

There are several things you should know before you use this method of repairing cast metal pieces. First is that the Bondo, even though it is reinforced with steel wire, is nowhere near as strong as the original pilot casting. If your train has a bad habit of diving off the train table you will soon have to make the repair again. I suspect that even a medium speed collision with a bumper might send you back to the repair table. I don't plan to put my newly restored 249E to any destructive testing.

Second, and most important, is that the hardener used in all of the modern plastics is vicious stuff and you should avoid contact with your skin, and should **NEVER** allow it to get into your eyes. After the Bondo is hard it is no threat, but while plastic you should treat it with respect.

I hope that if any of you have an old piece you'd like to save you'll give this method a try, I think you will find it a practical way to save a valuable old piece and avoid the cost of a reproduction frame. I am totally pleased with the way my 249E turned out. A thing of beauty is a joy forever, and having had a part in creating it gives great satisfaction.

Alco Windshield Frame Repair

I am now repairing an Alco windshield frame that Mrs. Mouse enlarged to make entry to her nest easier. Is anyone interested in my method of molding a new windshield frame and repairing a missing lower pilot beam?

Note on Epoxy Alternative

Since completing the repair described above I have made other repairs using a metal-filled epoxy material. I will make all future repairs to metal and plastic parts using this material rather than Bondo since the curing time of the epoxy gives me greater working time than the Bondo. The brand I bought is called "JB Weld," but I believe that any similar metal-filled epoxy or polyester would work equally well.

Some packages do not indicate that the product is metal-filled but if it advertises that it can be drilled and tapped you can bet that it is. If you prefer to work with polyester (quick curing) material, I would suggest you use "All Steel." This is a metal-filled, polyester body filler product sold in auto supply stores. Unfortunately the smallest size available is quarts and one quart will make an awful lot of small repairs.

Some of you may be wondering how to tell the difference between epoxies and polyesters. Epoxy and its hardener is nearly always supplied in equal-sized containers and mixed in equal (1 to 1) proportions. Polyester base material is supplied in large containers and the hardener in very small tubes. Polyester is mixed in approximately 50 to 1 proportions.)

Joseph H. Whitaker, Jr.

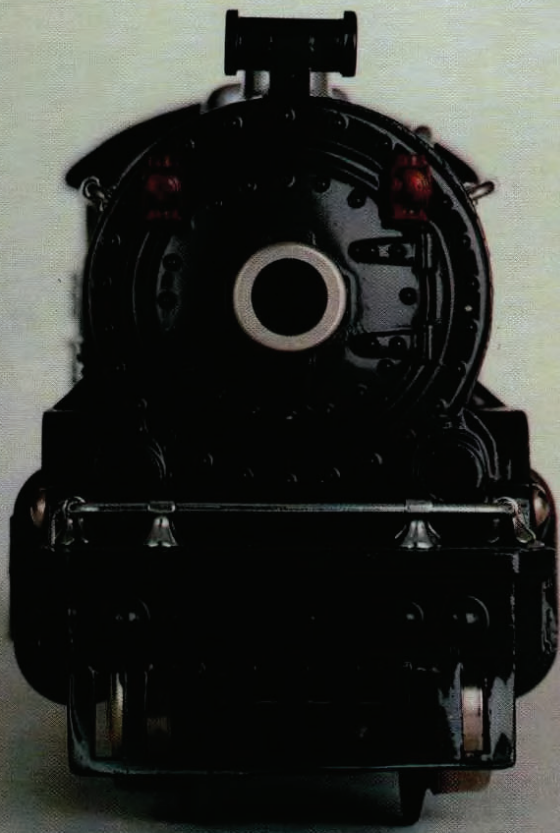


Photo 1



Photo 2

Figure 1

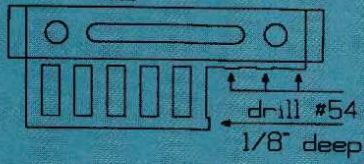


Figure 2

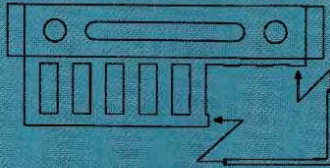


Figure 3

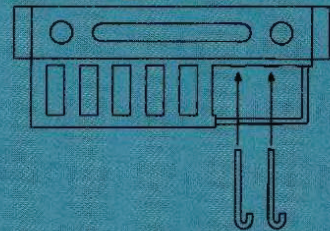


Figure 4



Figure 5

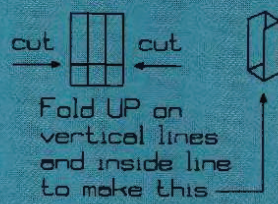


Figure 6

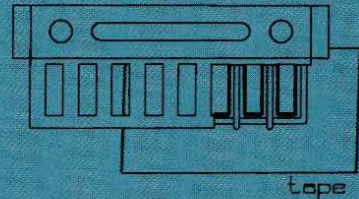
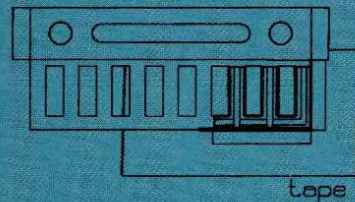


Figure 7

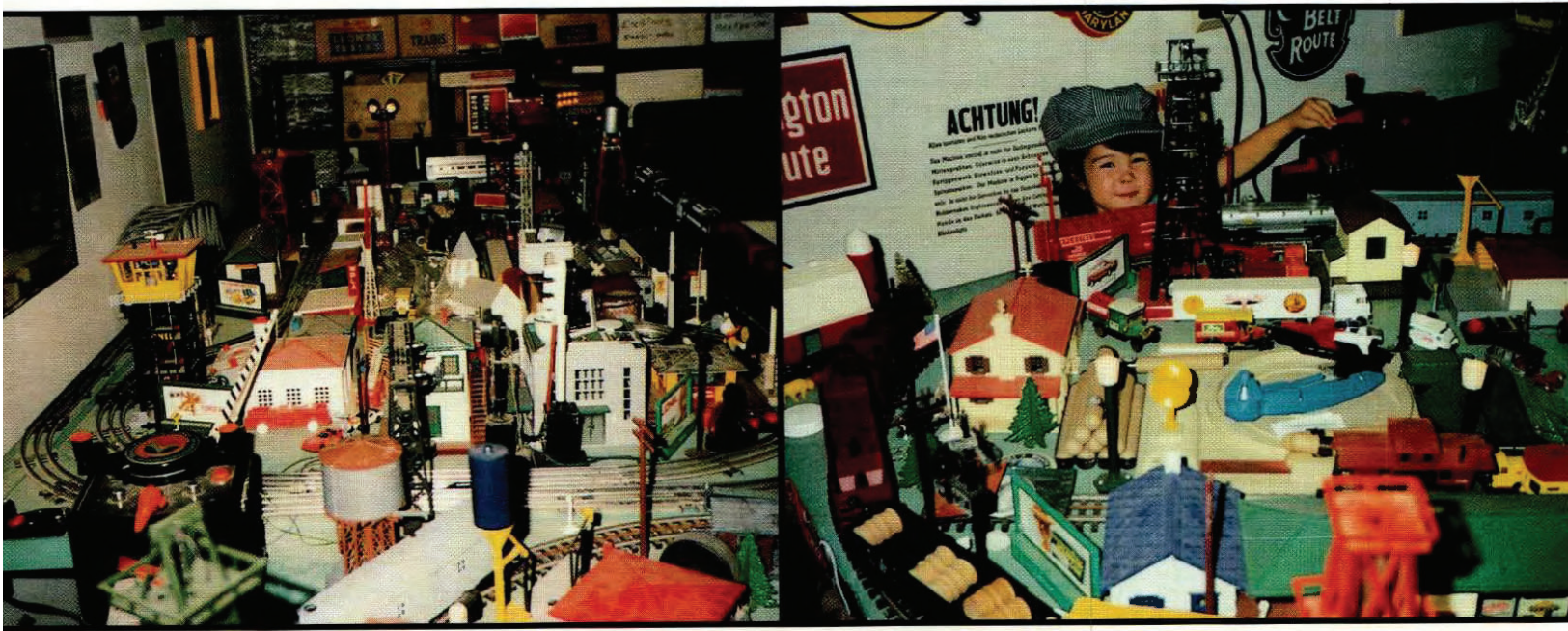


Figure 8



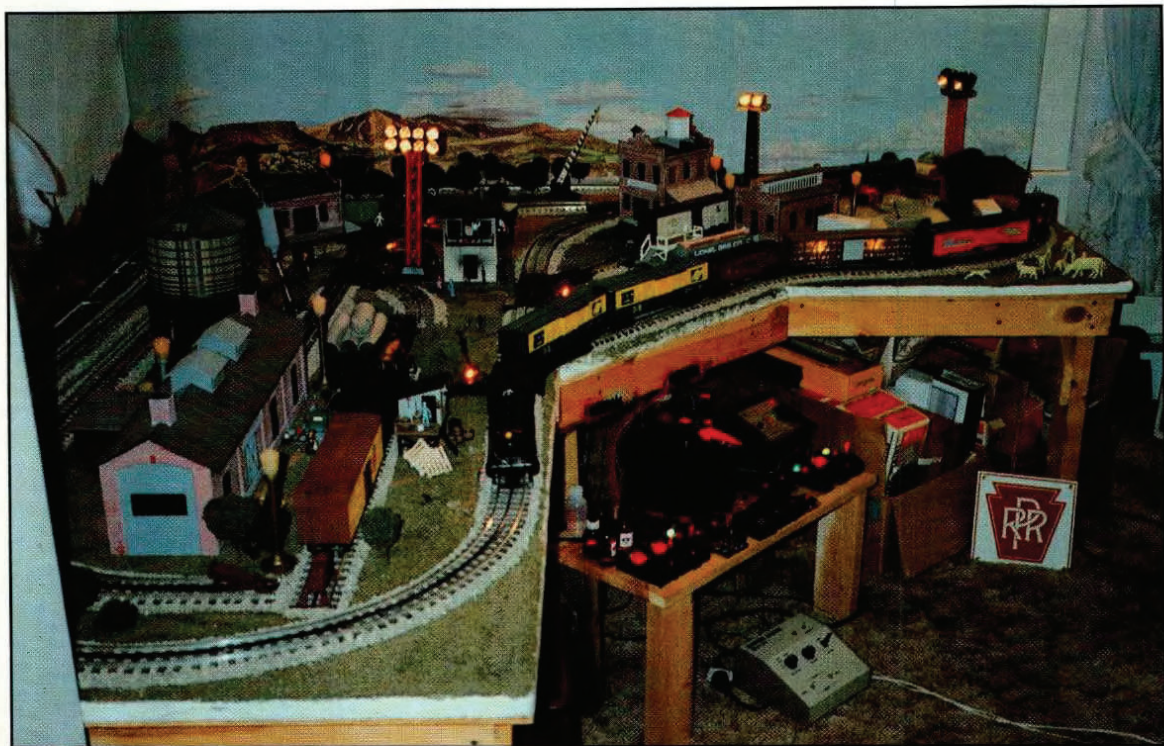
Lionel® Trackside Photos

Trackside photos is where the pictures tell the story.
Send in a photo of your layout, favorite train or accessory to share with everyone.



Above, John W. Abbe's, #2168, Lionel layout. His 4 year old daughter Mary Lee Abbe is running the trains.

Below, Charles R. Powell's, #12813, Lionel layout.



Tips for Improving the Operation of your Engines

Nickel Plate Berkshire Poor Performance

The 1982 Fall collector catalog shows a black Nickel Plate Road Berkshire. Other Berkshires have been produced, but this is the first one with the large six wheel Hudson style tender since the 726 Berkshire made from 1946-49. The 8215 locomotive shows the number "779" on the cab, has smoke, a headlight, an electronic whistle, Sound of Steam™, and magne-traction®. The smoke is visible and regularly puffs out as long as the fluid lasts. The shiny black finish of the locomotive with its white stripes and eight white wall driving wheels make it an attractive model. The test run of the loco was not impressive.

The loco is balky in its forward movement, a little less so in reverse. Turning the wheels by hand a definite snag is felt. Oil is applied to the wheel bearings and driving rods. A second run is made with the same poor results. In my opinion, this is not consistent with a new locomotive.

The locomotive shell is removed by one screw at the front, between the pilot wheels, and two screws at the rear, just behind the drivers. The worm gear inspection plate is removed and the lubrication is checked. It is skimpy, but there. Some light oil is added. The loco is carefully reassembled with all the screws tight and the running gear checked for binding. The test run is still poor with the same fits and starts.

The loco is disassembled again and the motor is tested. Out of the chassis, it runs fine. The repair manual is consulted and it suggests shims between the mounting studs and the motor. This is tried with no success. It is now noticed that when the motor is loose and resting on these studs a side to side movement is felt. Examination shows a screw projecting from the bottom of the chassis and touching the motor. By removing the rear truck the head of the screw can be seen. This is a factory adjusted set screw and by adjusting it myself I probably voided the warranty. A small adjustment down and the motor was now steady on its studs, meshing the worm and gear. I tightened the motor screws and placed the locomotive on the tracks. It ran smoothly both forwards and backwards and has continued that performance to this day.

The Berkshire's motor is geared to the rear pair of drivers only. The other three pair of drivers are driven by the side rods. Proper lubrication is a must if the drive rod holes are to be prevented from excessive wear.

Southern Pacific Daylight Steam Loco

After my troubles with the Nickel Plate Berkshire, I was a bit shy when the 8307 Southern Pacific Daylight steam loco was introduced in the 1983 catalog. Luck was with me, and I won a cash door prize and used it to purchase the Daylight loco.

This loco took off running right from the start and has run beautifully both then and now. The loco is supposed to have smoke from the stack and the steam cylinder. However, the amount of smoke produced by the loco is very small. In

order to see the smoke generator the die-cast shell can be removed by taking out one screw at the front and two screws at the rear from the bottom side of the loco. The smoke generator is a liquid type and is different in appearance compared to the pill type. It seems to be all plastic with a metal piston in the air chamber. Two tubes lead from the top of the generator to the steam cylinders. After prolonged use, the flexible plastic tubes leading from the unit to the cylinders split along the top of the tube and need replacement.

Virginian Fairbanks-Morse Diesel

I brought my first FM, the 8950 with the Virginian road name, home and discovered a problem. The engine would stop intermittently when going around a curve. By removing two screws, one on the front and one on the rear, the shell can be removed.

Now the inside works could be observed while operating the engine. This revealed a motor wire touching the headlight bracket when going around a curve as the motor turned with the trucks. A little careful bending and some insulating tape cured the problem.

While the shell is off you may want to check the motor grease and oil the motor bearings. Be careful when replacing the shell not to over-tighten the screws and crack it. The FM diesel is a fine running engine.

Santa Fe Fairbanks-Morse Diesel

The 8157 Santa Fe FM Diesel introduced in 1981 has an electronic diesel horn. The circuit board for the horn is held in place by a piece of double-stick foam. The foam can dry out or come loose quite easily. If the board comes into contact with the metal frame it will most likely short out. This will often damage the board. Insulate the board with some electrical tape to prevent this.

Smoke Fluid

While running my 8210 Joshua Lionel Cowen small Hudson loco I had the smoke unit burn out with a blaze of glory. I suggest you keep fluid in your smoke units and limit the track voltage to 15 volts or less.

William E. Dyson, Jr.



Upcoming LCCA Events

April 3, 1993 in Orlando, Florida at the North Orlando Hilton

Arnie Travitsky (407) 260-8599 is hosting this event with cohost Bill Trappen (407) 365-7860. Tables \$10. Guests \$4. Setup is at 7:30 AM. LCCA trading at 9:30 AM. Public trading at 11 AM. The North Orlando Hilton at Altamonte Springs is located on I-4 at highway 436.

April 17, 1993 in Fort Collins, Colorado at the University Park Holiday Inn

Larry Lauhe (303) 667-6856 is hosting this event with cohost H. Hagemeister (303) 493-7199. Tables \$10. Guests \$3. Family \$5. Setup is at 8 AM. LCCA trading at 9 AM. Public trading from 12 noon to 5 PM. The University Park Holiday Inn is located at 425 West Prospect in Fort Collins, Colorado.

April 18, 1993 in St. Louis, Missouri at the University City Heman Park Community Center

Larry Strassburger (314) 469-7219 is hosting this event. Tables \$5 for the first one, \$3 for additional tables. Setup at 10 AM. LCCA trading at 11 AM. Public trading from 12 PM to 2 PM. The University City Heman Park Community Center is located at 975 Pennsylvania, 2 miles east of I-170 on route 340.

April 24, 1993 in Houston, Texas at the Silber Holiday Inn

Tom Rogers (713) 996-0574 is hosting this event with cohost John Wilbeck (409) 849-9587. Tables \$9. Guests \$6. Family \$8. Setup is at 8 AM. LCCA trading at 9 AM. Public trading from 11 AM to 4 PM. The Holiday Inn is located on I-10W at Silber at 7611 Katy Freeway.

June 19, 1993 in Lexington, Kentucky at the Continental Inn

Harry Overtom (606) 268-1942 is hosting this event with cohosts Winfrey Adkins (606) 873-2497 and Bill Crace (606) 299-2423. Tables \$9. Guests \$3. Family \$5. Setup at 9 AM. LCCA trading at 9:30 AM. Public trading from 10:30 AM to 2:30 PM. The Continental Inn is located on US 60 at New Circle Road, 1.8 miles West on US 60 from I-75, exit 110.

July 3, 1993 in Chattanooga, Tennessee at the East Ridge Days Inn

Bill Stitt (615) 894-1284 is hosting this event with cohost Charles Sahn (615) 894-2599. Tables \$9. Guests \$5. Family \$7. Setup at 9 AM. LCCA trading at 10 AM. Public trading from 11 AM to 2 PM. The East Ridge Days Inn is located at exit 1 on I-75.

July 10, 1993 in Bossier City, Louisiana at the Bossier Civic Center

Bert Sams (318) 861-3554 or (318) 222-3554 is hosting this event. Tables \$8.50. Guests \$3. Family \$5. Setup is from 7:30 AM and on July 9th from 5 PM to 9 PM. LCCA trading from 9:30 AM. Public trading from 11 AM to 4 PM. The Bossier Civic Center is located on 620 Benton Road at I-20 exit 20B or exit 21.

July 21-25, 1993 in Dearborn, Michigan, *The LCCA 1993 Annual Convention*

Bill Button (313) 722-7464 is the Convention host for the LCCA 1993 Annual Convention. The convention will be at the Hyatt Regency Hotel in Dearborn, Michigan. Planned tours include: the Lionel factory, Madison Hardware, Lionel Visitor's Center layout, Carail (Dick Kughn's private antique auto and toy train museum), the Henry Ford museum and Greenfield Village. Registration materials will be included in the April 1993 issue of *The Lion Roars*. Plan to attend this terrific event.

About the Back Cover

Lionel Smithsonian Collection Dreyfuss Hudson Poster

Lionel Trains, Inc. is making available 2,000 numbered Dreyfuss Hudson posters. This beautiful poster, shown on the back cover, was designed to compliment the 500 two-rail Lionel Smithsonian Collection Dreyfuss Hudson locomotives sold earlier this year. You can order a poster for \$25 by sending a check or money order payable to Lionel Trains, Inc. to:

Dreyfuss Hudson Poster Offer
P.O. Box 748
New Baltimore, MI 48047-0748

Note that limited quantities (#501 to #2500) are available. Please do not send cash. There is no limit to order quantity per person. Postage and handling is included in the price. The actual poster measures 26 by 38 inches.

Note to paper collectors: the first 500 posters (#1 to #500) were signed by Richard P. Kughn, chairman of Lionel Trains, Inc., and were included with the 500 Dreyfuss Hudson locomotives. The serial numbers on the posters matched the serial number on the locomotives.

DREYFUSS HUDSON

