

# ***THE B&O MODELER***



*Number 47*

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**Bill Hanley's Life-Like N-37 with laser cut wood lining**

**Scratchbuilding an I-16 Caboose in Styrene p. 22**

**Provenance of an Antique p. 36**

**Elkins Railroad Museum B&O Dioramas p. 37**

**The Tatum Ladder Hangers p. 41**

**Proto 2000 War Emergency Hopper Gets a Facelift p. 45**

**B&O HO-Scale Freight Cars 1900-1970 p. 48**

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## AN INVITATION TO JOIN THE B&O RAILROAD HISTORICAL SOCIETY

The Baltimore and Ohio Railroad Historical Society is an independent non-profit educational corporation. The Society's purpose is to foster interest, research, preservation, and the distribution of information concerning the B&O. Its membership is spread throughout the United States and numerous foreign countries, and its scope includes all facets of the B&O's history. Currently the Society has over 1600 registered members.

Members regularly receive a variety of publications offering, news, comments, technical information, and in-depth coverage of the B&O and its related companies. Since 1979, the Society has published a quarterly magazine, *The Sentinel*, dedicated to the publication of articles and news items of historical significance. Other Society publications include monographs, calendars, equipment rosters, and reprints of original B&O source material. Their purpose is to make otherwise unobtainable data available to the membership at reasonable cost.

Membership in the Society is a vote of support and makes all of the Society's work possible. It provides those interested in the B&O with a legitimate, respected voice in the railroad and historical communities. By working together, B&O fans are able to accomplish much more than by individual efforts. No matter how diverse your interests or how arcane your specialty, others share your fascination with America's most historic railroad. We invite your participation. Several classes of [annual memberships](#) are available, Regular annual memberships are only \$45.00. If you would like to join, click [here](#) to fill out our membership application, print a copy and mail it to:

**B&ORRHS**

**Attn: Membership**

**P. O. Box 1608**

**Sykesville, MD 21784-1608**

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## FROM THE EDITOR

### COMMENTARY BY JOHN TEICHMOELLER

#### A RANT, WORDING AND A TRIBUTE

##### Valley Forge Prototype Modelers Meet and Privacy

The last weekend in March found us at one of the two Pennsylvania modelers' meets. In even years we visit the Desmond Hotel and Conference Center in Malvern, PA. The facility was a bit dysfunctional this year, undergoing renovations, apparently in preparation for reflagging into the Doubletree family. Plus the Wawa is now gone. Due to room lighting and table depth and my age I am finding it more and more difficult to appreciate the models at these meets. Eric Hansmann exerts intrepid efforts to get decent photos in spite of the challenges, so we here offer his photo of Fred Lass's P-7, upgraded from the venerable Mantua unit. Next year we will switch to Greensburg, PA. The meets each do have a different flavor; to me Greensburg seems to trend more industrial, usually some B&O flavor at both.



I continue to be perplexed as to why not all but many folks who bring models to display at these meets do not provide contact information. The purpose of providing contact information, of course, would be to allow fellow meet attendees to communicate with the modelers in a manner frequently impractical due to the crowds at the meet. I know, I've heard it's an overreaction to the "paperwork" requirements of NMRA contests. But we're not talking about "contest" situations where, in theory, the judges are not supposed to know who the modeler is (but given how few models are in contests these days, I suspect identity is not much of a secret.) Now some modelers do give their identity and contact information and even provide data about their models. Indeed, someone at the Valley Forge meet, I think Ken McCorry, makes name cards to go with the models where the modeler has not done so. For the B&OHS convention displays, we suggest a little 4x6 "data card". See example on the following page. It is available for download on the B&O Historical Society website in the Events section. at <https://www.borhs.org/events/Documents/convmoccardv3%2011-11.pdf>. But how about an e-mail at least? What am I not getting here? Are the secret modelers afraid they will get on some porno underframe spam list?

##### Layout vs. Model Railroad

The February 2018 issue of *NMRA Magazine* ran a piece by Fred Headon entitled "Using 'Model Railroad' instead of 'Layout.'" I liked his argument and will try to adopt his usage. Will probably lapse occasionally.

##### Bill Barringer

Finally, we give tribute to the memory of former Modeling Committee Chair Bill Barringer who died April 4, 2018 after a long and debilitating illness. Joe Nevin points out that Bill was a charter member of the B&ORRHS Board of Directors and was a resource to modelers owing to the time he had spent working at Mt. Clare Shops. I didn't know Bill well; our last connection was working on the Ilchester Station Project. This included the memorable trip with Nick Fry to the National Museum of American History in Washington, DC in 2006 to search their files for the drawings of the station that their index said weren't there (for those who have not seen my program, "The Ilchester Station Project," we did find the drawings but they weren't of the station as we know it.) On the way home we talked about our experiences in the military in Japan and Korea (his duty was 10 years before mine). We laughed about all the crazy things GIs used to do, and he later mailed me a audiotape



cassette with “Moshi moshi ano ne” and other crazy songs GIs who had drunk too much sake would sing trying to pick up Japanese girls in bars. I found photos of some of Bill’s models from the contest at the 2005 Staunton convention including a scratch-built E-27 and partially completed Cincinnati train. On our drive we talked about getting together some time and comparing models we had acquired in Japan, including 5 of my PRR J1s, 2 of which I had converted to 2-8-4s for my then freelance railroad, as well as some Americanized JNR electrics. But that never happened.



### ***Baltimore & Ohio Railroad Historical Society Photo/Model Information***

(Feel free to attach supplemental information if you like, e.g. drawings, photos, etc.)

Scale: ☐ Z ☐ N ☐ HO ☐ S ☐ O ☐ Large ☐ Other \_\_\_\_\_ ☐ Photo

B&O Class and Road Number (as applicable): \_\_\_\_\_

Structure or Photo Location/ Prototype Era Represented:

Construction: ☐ Scratch ☐ Kit ☐ Kit-bash ☐ Other \_\_\_\_\_

Paint/Decals: \_\_\_\_\_

For Models, Details Added & Extra features / For photos, technical data/camera/film/special lighting, etc.:

Weathering: \_\_\_\_\_

Information Sources/References:

Additional Comments:

Modeler's Identity/Contact Information:

V8/7/2018

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## COMPANY STORE

BY JOHN TEICHMOELLER

The Society's Company Store contains an immensely rich amount of information in the form of reprinted documents, in many cases original company publications. However, this candy store may be overwhelming to those wanting to know more about the B&O. So as we began in *Modeler No. 46*, we will try to give you some additional guidance in the candy store. We hope to continue this feature, but it may be on a sporadic basis.

**Books section (not Equipment)** -- We concluded last issue's installment with the Summary of Equipment series of reprints. One of the query subject areas that arises often on the Yahoo list is that of diesels. Jim Mischke's Diesel Roster, not a reprint and thus catalogued in the Books section, is much more than a plain "roster" and will answer many of your technical questions. The Company Store listing reproduces the contents page. The book is organized in a way that makes finding what you are looking for easy. The summary and index is organized with tables of loco classes alphabetical by builder. The units are listed by model and type, then the number series is given, then the pages where roster information can be found, and finally there are specification pages.

The roster section itself comprises the majority of the pages and is a unit-by-unit tabulation with notes that include disposition. Yep, every unit. And the data on that little Plymouth and the 4 GE critters are there. Obviously the last data field is dynamic and some will change in future revised editions of the book. The 1957 renumbering table is included as is a B&O/CSX renumbering table. Several pages provide quick reference to secondhand owners. Tables showing "fleet strength" by year are included up to 1987, the year of the official CSX merger. The early diesel classification system is decoded. Divisional assignments for 5 different years are included, a useful set of tables for those wanting to have just the right units in service on their model railroads. Finally there are tables of technical specifications. Gas electrics and Budd cars are included. There are no diagrams or photos—check out 74105 and 74151 in the Equipment section.

*10025 Baltimore and Ohio Railroad Diesel Equipment Roster, Third Edition*

**Form 6 section** -- By now you've hopefully obtained the relevant volume of Roadway Maps, the so-called Bernie Beavers maps. What if your model time machine is visiting an earlier era—say a generation or more—before your BB maps, and you are studying some old photographs? You see an industry along a siding in the photo and there is nothing there—maybe even no siding—on the BB map. The appropriate issue of Form 6 will probably shed some insight, answer your question and lead to more questions.

The Form 6 is organized by Division and lists all the stations, sidings and customers served by milepost. And much more—it includes such things as icing stations, livestock showering device locations, stock pens, track scales, turntables, and reproduction of relevant pages from the Official Railway Equipment Register, and many other items of useful information. These were not generated every year. As I understand it, the last one was done for 1954—at least that's the last issue in the Company Store catalog. My copy is headed "Official List No. 30" so presumably there were 29 published before the January 1, 1954 issue. Official List No. 30 also "cancelled" List No. 29, January 1, 1948. The Company Store lists 9 issues, going back to 1889. You may already have the section of the Form 6 relevant to your modeling if you have attended a Society convention on that part of the line because the relevant Form 6 is typically included in the handout package. Even so, you need the whole book—you'll be amazed. As the catalog states: "You can't run a railroad (or a model railroad) without a Form 6 to show what's on the line at a given point."

*76054 Form 6 Official List*

Hopefully at least some readers will find the above interpretations of these publications helpful and will allow them to appreciate more fully the great resources available to us. And readers are invited to send us your favorite "must-have" reprint publications from the Company Store.

Future issues: MofW equipment, Freight Facilities and Directors Trips.

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## UPCOMING EVENTS FOR POTENTIAL B&O MODELS ON DISPLAY OR B&O PRESENTATIONS

We don't receive direct communications from any Prototype Modelers Meets, so the listings below are a function of Scott's and John's "general awareness." Guess we have too low of a profile! Moreover, since we have an indeterminate publication schedule, some of the events below may have already occurred by the time you read this. Nevertheless, the links provided should provide you with necessary information about the group's next event.

In any event, let us know if your "favorite" meet that is likely to have B&O content is omitted and give us details. Have other meet organizers send notices to us at: [rmighpr@comcast.net](mailto:rmighpr@comcast.net)

### **2018**

[B&O Historical Society Annual Convention](#) – September 20-23, 2018 in Englewood, OH.

[Mid-Atlantic RPM Meet](#) – September 21-22, 2018 in Baltimore, MD.

[RPM Chicagoland](#) – October 18-20 in Lisle, IL.

### **2019**

[Prototype Rails 2019](#) – January 10-12, 2019 in Cocoa Beach, FL.

[RPM East](#) – March 22-23, 2019 in Greensburg, PA.

[New England/Northeast Railroad Prototype Modelers Meet](#) – May 31 and June 1, 2019 in Enfield, CT.

### **2020**

[Valley Forge Railroad Prototype Modelers Meet](#) – March 26-29 in Valley Forge, PA.

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## NEW PRODUCTS

BY CLARK CONE AND THE MODELER STAFF

### New Product Notices and Disclaimer

We haven't heard any complaints or other feedback about what we have featured or not featured, realizing that a model is a representation of reality and that modelers have different standards of fidelity. We are continuing to include Chessie System products if they have B&O reporting marks. Reader's opinion welcomed.

*Does it seem like we have an unusually large number of "stand-in" products this time? As always, let us know if we have missed something that needs to be publicized. JT*

### **Accurail 50-foot Insulated Boxcar Kit #5826 – HO-scale**



Available now from Accurail, the model is based on a prototype with welded sides, plug doors, and a Stanray diagonal panel roof. All Accurail kits include appropriate trucks with plastic wheels and Accumate knuckle couplers. No class designation discernable in promotional photo, but car is a decent looking tolerable stand-in for B&O/C&O era class B-83. Detail level would expected to be consistent with Accurail norms, i.e. mostly cast-on. Inspection on the hobby shop shelf would be necessary for more definitive commentary regarding fidelity of roof, door and ends. For additional information on all Accurail products contact a dealer or visit <http://www.accurail.com/accurail/5800.htm>.

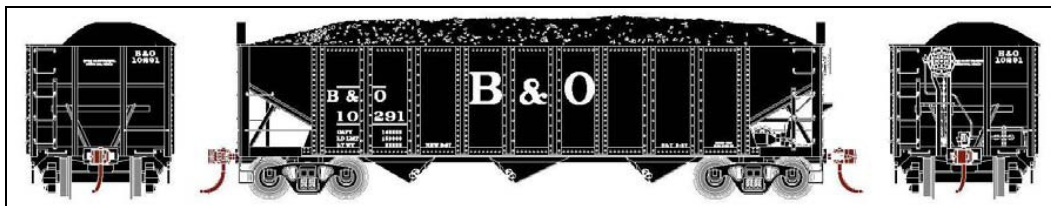
### **Athearn Genesis GATC 70-ton Airslide Covered Hopper - HO and N-scale**



Athearn has added several new details to its HO scale GATC 2600 cu. ft. 70-ton Airslide covered hopper. The revised car will be released as a Genesis series model. The upgrades include uncoupling levers, train line hoses, and some railroad-and road number-specific details such as Bettendorf or roller bearing trucks with rotating bearing caps. Artwork shows incorrect class N-17, car is believed to actually be N-47a. Hopefully the production model will be right, as this promises to be a nice car.

Athearn is quoting a March 2019 date for the next release of its N-scale model. The model represents an early GATC Airslide body. Features include a see-through metal roof walk, separately applied roof hatches, and wire grab irons. The ready-to-run car will have either Bettendorf or roller bearing trucks as appropriate. The trucks will be fitted with machined metal wheelsets. No class visible on above artwork but probably N-47a like parallel HO-scale car release. Athearn Trains, 800-338-4639, <http://www.athearn.com/>.

### Athearn 3-Bay, Ribbed Side Hopper Cars – HO-scale



A new production run of triple-bay ribbed side hopper cars with removable coal loads is included in Athearn's April 2019 production schedule. Separately applied details on the Ready-to-Roll model includes wire grab irons, brake equipment, end braces, and stirrup steps. The B&O cars have peaked ends. Nine road numbers will be available.

This is a nicely upgraded (wire grabs, slope sheet braces and more) version of the ancient Model Die Casting/Roundhouse triple hopper tooling. There is no B&O class stencil visible on the artwork but car is similar to some 10-stake Raceland Shops rebuilds B&O got from C&O. Too bad Bowser hasn't done this for Pennsy fans to their suite of PRR hoppers. Athearn Trains, 800-338-4639, <http://www.athearn.com/>.

### Bachmann Bay-Window Caboose – HO-scale



Model features new and existing tooling, prototype-specific bay window, see-through running board, ladder, metal wheels, and E-Z Mate Mark II couplers.

No B&O class designation visible on company artwork and none claimed in promotional material; consider as a decent looking but not exactly dirt cheap stand-in for I-18 or C-26. CSHS did a kit for the C-26. For additional information contact a dealer or Bachmann Trains, 215-533-1600, <http://www.bachmanntrains.com/home-usa/>.

### Bowser Trains 100-ton Three-bay Coal Hoppers – HO-scale



Bowser is taking reservations for a new production run of 100-ton triple-bay coal hoppers. A release date of February 2019 is planned for the HO-scale model. The prototype evolved from a 1960 N&W design. Increasing the height of the sides to 12-feet 3-inches raised the cars capacity to 3433 cu. ft. Construction of the larger car began in 1964 with more than 130,000 being built. Spotting features on Bowser's HO-scale version include roping eye with integral end buffers, end slope sheets that are at a steeper angle than the hopper sheets, and 13 riveted side posts with the two middle panels



wider than the others. Additional details include Wine door locks, full height side ladder stiles, knuckle couplers, and roller bearing trucks with 36-inch metal wheelsets. Road names will include B&O and various flavors of Chessie (B&O, C&O, and WM). For additional information contact a dealer or visit [www.bowser-trains.com](http://www.bowser-trains.com).

### Atlas Trainman PS-2 Covered Hopper – HO and N-scale



Due for release during the fourth quarter is a Trainman series PS-2 twin bay 2,003 cu. ft. covered hopper car. The model will come with either solid bearing or roller bearing trucks as appropriate. No class designation shows on artwork. For additional information contact a dealer or Atlas Model Railroad Co., 908-687-0880, [www.atlasrr.com](http://www.atlasrr.com).

### Walthers 40-foot AAR 1944 and AAR 1948 Boxcars – HO-scale



Walthers has set an August release date for this 40-foot AAR 1944 boxcar. The Mainline series ready-to-run HO-scale model will be available decorated for Baltimore & Ohio (Time-Saver Service).



Also, a September release date has been announced for a new production run of 40-foot AAR 1948 boxcars. Significant differences from AAR's 1944 design include a diagonal panel roof and Improved Dreadnaught 4-4 ends with a truncated top rib. Additional spotting features on the Mainline series model include an Apex steel running board, 6-foot Youngstown sliding doors, and an Ajax brake wheel. The HO-scale ready-to-run model comes with metal knuckle couplers, and Bettendorf trucks with 33-inch machined metal wheelsets.

These cars were announced in Modeler No. 41; remember since they are in Walther's "Mainline" series, accept these as stand-ins for the car classes lettered—i.e. there are deviations probably in any or all of doors, ends, roof, side panels. For additional information contact a dealer or visit [www.walthers.com](http://www.walthers.com).

### Intermountain 42-ft Flat Car HO-scale



Available from InterMountain is this ready-to-run HO scale 42-foot flat car with fish belly. Model is a NYC car, not a B&O prototype, a "stand-in" for B&O P-18 would be a long stretch; see posting on the B&O Yahoo chat list by Jim Mischke No. 71294, date 10-22-14. For additional information on all InterMountain products, contact a dealer or visit <https://intermountain-railway.com/>.

## Moloco Trains Fruit Growers Express 50' RBL – HO-scale



Moloco Trains has released a model of an insulated boxcar (Refrigerated Bunker Less (RBL)) that Fruit Growers Express (FGE) introduced in 1963. B&O cars are available in four different numbers. According to a recent discussion on the B&O email chat list, these cars were utilized by the B&O to service Carnation Milk in Clarksburg, WV and H. J. Heinz in Pittsburgh, PA.

The highly detailed model features separate ladders, grab irons and door actuator rods, an overhanging Stanray roof with Morton running board and crossover platforms, accurate draft gear coupler boxes, railroad specific cushioning devices and associated underframe layout. For additional information visit <https://www.molocotrains.com>.

## North American Railcar Corporation PS 5077 Cu. Ft. 50ft Boxcar B&O Class B-133 – HO-scale



Pickens Railroad purchased a number of kits from both Berwick Forge and Fabricating (BFF) and Pullman Standard to be assembled in Golden Tye's Pickens, SC shops. Between May and July, 1976, Golden Tye (GT) assembled 81 kits and put them into the PICK 55500-55580 series. In 1985, Chessie System took possession of 30 of those 1976 built kit cars, refurbished them and placed them in the B&O 401170-401199 series, class B-133.

This detailed replica of Pullman Standard's 5077 cubic-foot single door boxcar (Lot 9831) has been meticulously researched and designed by North American Railcar. The plastic body shell will have accurate details in plastic, wire and etched metal:

- Rigid (non-cushioned) underframe
- Horizontal-lever brake gear
- Hennessy "Slide-Well" power-assist door opener with type 3 hand wheel
- NARCorp high performance/low friction 70-ton ASF Ride Control trucks with 33" diameter metal wheels
- Genuine Kadee #158 semi-scale magnetic couplers in semi-scale coupler boxes

For additional information visit [www.pwrs.ca/client\\_services/reservations/product\\_profile.php?ProductID=253650](http://www.pwrs.ca/client_services/reservations/product_profile.php?ProductID=253650)

## Rapido FB-2/FPB-2 – HO-scale



FB-2

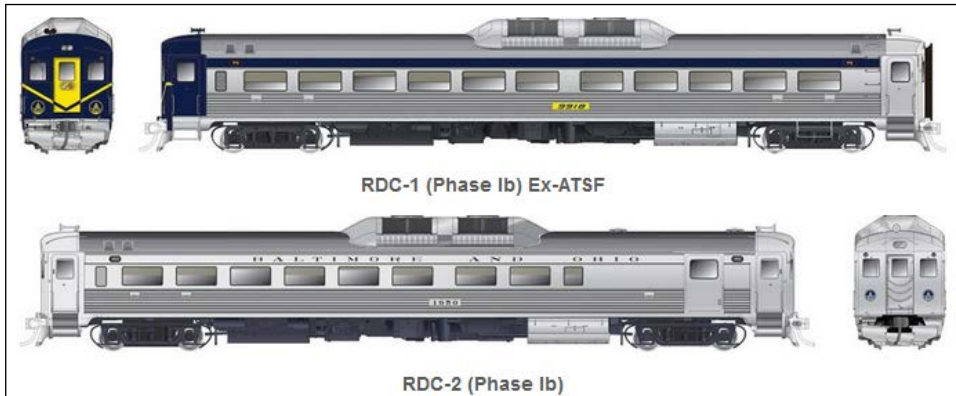


FPB-2

Joining the Rapido FA-2 and FPA-2 locomotives are FB-2/FPB-2 units, which will be available separately. The FPB-2 has a steam generator and water tank in order to provide steam heat for passenger cars. Several fuel and combined water/fuel tank variations will be made. Baltimore & Ohio and undecorated schemes are available. For additional information including making a reservation, contact a dealer or visit <https://rapidotrains.com/ho-alco-mlw-fb2/>.

See additional commentary in [Enthusiast Press](#) section.

## Rapido Budd RDC – HO-scale



The Budd Rail Diesel Car, RDC or Buddliner (or Speedliner on the B&O) is a self-propelled diesel multiple unit (DMU) railcar.

Between 1949 and 1962, 398 RDCs were built by the Budd Company of Philadelphia, Pennsylvania, United States. The cars were primarily adopted for passenger service in rural areas with low traffic density or in short-haul commuter service, and were less expensive to operate

in this context than a traditional diesel locomotive-drawn train with coaches. The cars could be used singly or coupled together in train sets and controlled from the cab of the front unit. The RDC was one of the few DMU trains to achieve commercial success in North America. RDC trains were an early example of self-contained diesel multiple unit trains, an arrangement now in common use by railways all over the world.

Rapido's model looks sharp, with its factory-applied wire grab irons, etched-metal grills, crisp graphics, and smooth simulated stainless-steel finish. The underbody looks "busy", with the array of tanks, pipes, reservoirs, brake lines, and other equipment Rapido is known for. The interior is just as impressive, with constant lighting and painted seats. The twin motors are hidden in enclosures between the rows of seats, below window level, offering an unobstructed view. The models bear truck sideframes, Gyalights, and other details specific to their prototypes. But to ensure modelers can accurately reproduce every variant of the prototype at any point during its life, Rapido's RDC includes a sheet of decals and a packet of optional, user-applied details, including a pilot, a pilot cover, window grills, alternate roof grills, exhaust stacks, antennas, horns, diaphragms, and a Gyalite housing.

Rapido has extended the order deadline to August 13, 2018 with delivery in late 2018. For more information about the RDC models, go to <https://rapidotrains.com/ho-rdc-second-run/>.

The preceding descriptive wording from Rapido unfortunately is not B&O specific. See additional commentary in the "Enthusiast Press" section; fidelity checkers of Rapido's B&O version wanted! Sorry no Modeler funds available for purchase of review samples—you just gotta buy one and write a physical (not mechanical) review.



## Illinois Central Gulf Decals - Fruit Growers Express 50-foot insulated (RBL) Boxcar Decals – HO-Scale

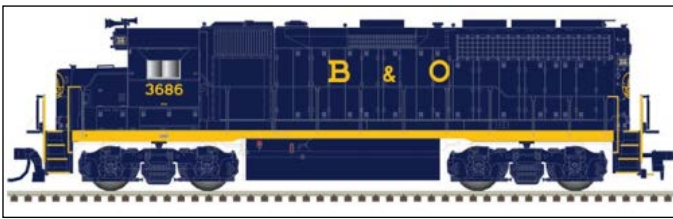
These are very comprehensive decal sets and are 55 square inches in size. In addition to B&O, each set will do up to three different cars of other railroad reporting marks.

SE-22 for B&O cars from 1964+

SE-23 for B&O cars from 1971+

For additional information visit <http://home.mindspring.com/~paducah/>.

## Atlas Baltimore & Ohio GP40 – N-scale



Atlas reports that the next release of its N scale Baltimore & Ohio GP40 diesel locomotive will be during the fourth quarter of 2018. DC and DCC models with ESU LokSound will be available. For additional information contact a dealer or Atlas Model Railroad Co., 908-687-0880, <https://shop.atlasrr.com/>.

## Atlas EMD SD50 Diesel Locomotives – N-scale



New road numbers: Chessie System (Baltimore & Ohio and Chesapeake & Ohio reporting marks; two numbers each) Body style available undecorated. Directional golden white LED headlights, blackened metal wheels, and Accumate couplers. Direct-current model with speaker only, \$139.95; with ESU Digital Command Control sound decoder, \$249.95. Master line. For additional information contact a dealer or Atlas Model Railroad Co., 908-687-0880, <https://shop.atlasrr.com/>.

## Bluford Shops Bay Window Cabooses – N-scale



Bluford Shops has announced its second run of International Car bay window cabooses, including in this release, B&O/Chessie. Numbered in B&O's C-26a series, International Car caboose had different window arrangement from Bluford's artwork. Nice stand-in model. Why did B&O always have to be different? For additional information contact a dealer or visit [www.bluford-shops.com](http://www.bluford-shops.com).



## Fox Valley Models Class I-12 Wagontop Caboose – N-scale



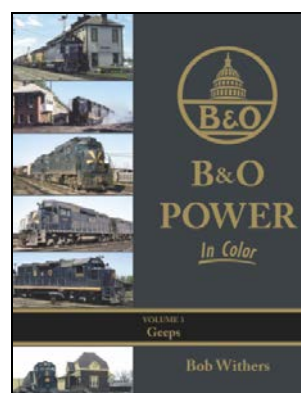
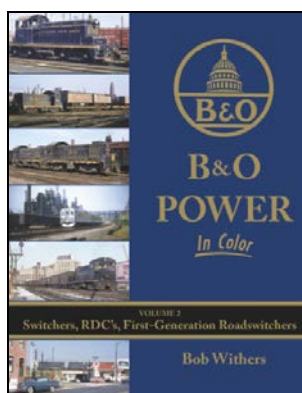
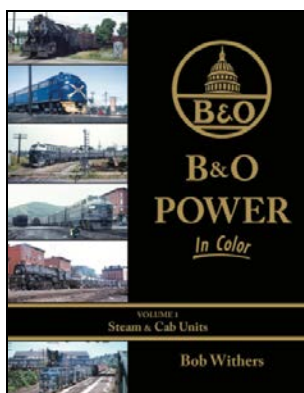
Fox Valley Models is offering N scale models of a B&O class I-12 Wagontop Caboose. Three road numbers are available with white lettering and a 25-inch capitol herald. This is the scheme B&O used in the 1945-1955 period. What's not to like about an I-12? For additional information contact a dealer or visit [www.foxvalleymodels.com](http://www.foxvalleymodels.com).

## Micro-Trains Line 100-ton Hopper with a Fiberglass Roof - N Scale



To meet the demands of a peak grain season, B&O installed temporary fiberglass roofs on many of its 100-ton triple-bay open hopper cars. Dubbed a "Hopper Topper", the lightweight roof could be easily removed and stored for future use. This unique model is available now from Micro-Trains. For additional information on all Micro-Trains Line products contact a dealer or visit [www.micro-trains.com](http://www.micro-trains.com).

## Morning Sun Books – B&O Power In Color Series



Book reviews are the purview of *The Sentinel*, but because Jim Mischke's diesel book has no photos (see Company Store section in this issue), we felt it was appropriate to cite these books of diesel photos. So Morning Sun Books Inc. has released the third and final book in the series *B&O Power in Color*. The first volume in the series, which covers the entire B&O diesel roster, began when the last of the steam engines crossed paths with the diesel cab units that took over their role. In *B&O Power In Color Volume 2: Switchers, RDC's, First-Generation Roadswitchers*, author Bob Withers includes switchers built by General Electric, Alco, Baldwin, Lima-Hamilton, the Electro Motive Corporation and Electro Motive Division of General Motors, and Fairbanks Morse; and Budd's Rail Diesel Cars. He reveals that Alco, Ingersoll-Rand and General Electric combined their efforts to produce B&O's first diesel locomotive in December 1925, which is on display now at the National Museum of Transport in St. Louis.

The third, and final, volume, *B&O Power in Color, Volume 3: Geeps* is expected October 1<sup>st</sup>, 2018. Withers describes the B&O motive power: GP9 freight road switchers and the GP7 freight road switchers that didn't make it into Volume 2,

GP7 and GP9 passenger road switchers, Baldwin freight road switchers, and higher horsepower EMD units. The book will include build dates and most locations, dates and dispositions. Advanced reservations are being accepted at [Morning Sun Books, Inc.](http://MorningSunBooks.com) No, we do not know whom if anyone helped in vetting the captions or has or is compiling an “errata list.”

### Electronics/controls

Not your typical engines and freight cars we talk about here, electronics is playing a larger and more effective role in model railroading. Atlas has released a **Universal signal control board**, compatible with N, HO, and O scales; backward compatible with existing Atlas signals. Common anode or common cathode signals can be used with board. The board can be used on its own or as part of an integrated block system. The system includes options to enable approach-only operation, two- or three-block indication, and Baltimore & Ohio-style position/color lights. Additional details, price, and release date to be announced. Atlas Model Railroad Co., 908-687-0880, [www.atlasrr.com](http://www.atlasrr.com)

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## NEW PRODUCTS MODELER 47

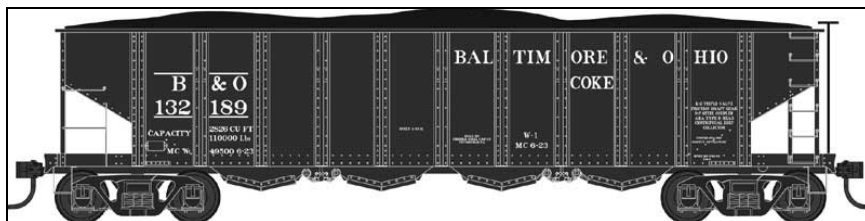
### SECOND SECTION

BY JOHN TEICHMOELLER

#### N-37 inserts

Excellent modeler and *B&O Modeler* contributor Bill Hanley was upgrading his Proto 2000 N-37 emergency hoppers by adding cut levers, air hoses and 13 Great States herald and decided to do something about the cars’ interiors. Luckily he has a friend with a laser cutting machine whom he was able to talk into making a set of 1/64” thick wood simulated board inserts. These are arranged to “peel and stick.” Bill is offering a set sufficient to do two cars for \$7. Contact Bill directly at [wmhanley@verizon.net](mailto:wmhanley@verizon.net) for ordering and payment details (see page 45 for more information).

#### “W-1” hopper from Bowser



Bowser is planning to release their PRR H21 “old style” (called “clamshell” by those unwashed in PRR freight car color) hopper tooling lettered for the B&O W-1. Not a bad stand-in. There are numerous detail discrepancies including end verticals, gussets in the slope sheet notch, differences in the “box” end sill, some cars with extended side stakes 3, 5, 7 and 9, end ladders instead of grabs, Bettendorf T-section 50-ton trucks-- and probably other differences I’ve missed. Still you might not have known unless I told you. Thus a stand-in. These cars seemed to last long, especially in cinder service possibly because the drop doors were convenient for depositing cinder ballast.

Westerfield Models offers a “spot on” resin kit for the W-1. [Westerfield W-1 Models](http://WesterfieldW-1Models.com). Vic Roseman published an article in *Railmodel Journal*, November 2000 (download article at Trainlife.com ([http://magazine.trainlife.com/rmj\\_2000\\_11/](http://magazine.trainlife.com/rmj_2000_11/)) on using the Bowser car and making slight modifications; apparently he was unaware of the Westerfield car, since no mention was made in his article which nonetheless has some interesting photos and data.

#### Details for your models from JL Innovative Design

Per the May 2018 *Model Railroader*, JL Innovative Design has officially purchased the Selley Finishing Touches line of detail castings from Bowser. JLID reportedly will be repackaging the line as painted and finished details as is the rest of their line. There are some hidden treasures in the Selley catalog, and it will be interesting to see how many JLID keeps. One of the items listed in the *MR* blurb (and I frankly never recall this from the Selley catalog) is a set of wheel stops and derail for \$12.95. In an early 2018 visit to Bowser’s in Montoursville, PA, their Selley pegboard was still full of the traditional packaged parts.

### Freight car model engineering upgrades from Walthers—some musings

For many years, modelers of open and covered hopper cars have had to satisfy themselves with clunky cast-on ladder grabs on model cars from many of the manufacturers. The alternative is scraping off the cast on details and drilling lots of No. 78 holes to replace with wire grabs. Of course, there have been exceptions to the cast on grab format: Kadee's cars, Life-Like's brief offerings of twin hoppers with oversized wire grabs, Broadway Limited's H2a hoppers and Athearn's re-release of the old Roundhouse 70-ton triples with wire grabs are those that readily come to mind. But there is promise of improvements from Walthers: specifically, the November 2017 issue of *Model Railroad News* carried a photo showing a test shot of a forthcoming Trinity 3281 covered hopper. Its end details are rendered as an all-styrene "cage," in much the same way Kadee does it. Sign of improvements to come—future Walthers "Proto" offerings?

### The Mother Ship

For those really ambitious modelers who are trying to represent the Baltimore Terminal or the Pratt St. line, (*Sentinel* 1<sup>st</sup> Qtr. 2008, Vol. 30, No. 1), Custom Model Railroads is offering this impressive kit based on the "Mother Ship," the B&O General Office Building at 1 N. Charles St. Probably laser cut acrylic like their other products. Or you can repurpose it as today's Hotel Monaco and B&O Brasserie Restaurant.

See Custom Model Railroads website at <http://www.custommodelrailroads.com/index.html>



### B&O's Overland?



From MTH, something we probably won't have on our Xmas list, B&O's little known Overland Limited. Olive Dennis is innocent here. ☺



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## EXTRA SECTIONS FROM THE READERS

By JOHN TEICHMOELLER

### Section 1 HO-Scale P-13 Flat Car

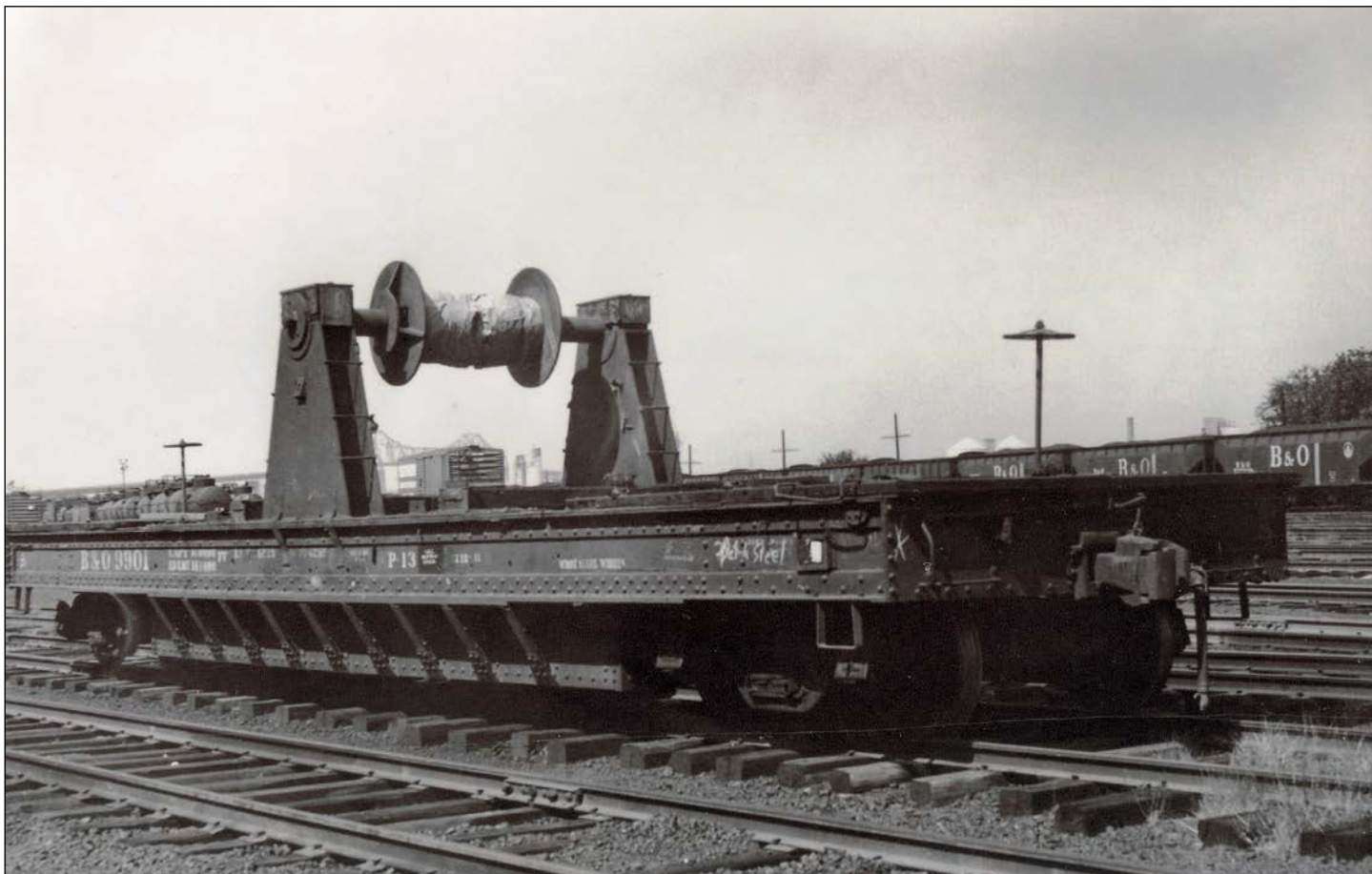
Reader Tom Greco from Texas is working on his NMRA Master Model Railroader rating. He was able to have two scratch-built models of a B&O P-13 well flat judged. They met the requirements and count towards the “Master Builder-Cars” requirements of eight superdetailed cars, four of which had to be scratchbuilt. One of Tom’s was in HO, the other, for Ed Kirstatter, in S. The rules have more complexities but they don’t say you can’t have two of the same class car. Great job, Tom! Now that you’ve modeled these, expect one of the manufacturers to offer it RTR.



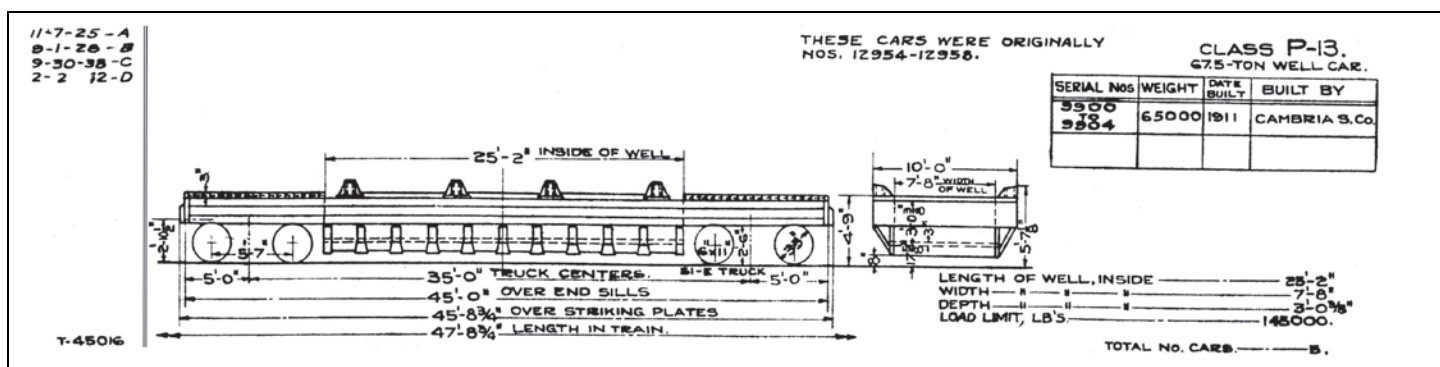




Here is the S-scale version of the car with load built by Ed Kirstatter. Ed says "it was a difficult project."



The chalk marks on the right side sill suggest 9901 may have just delivered a ship propeller to Bethlehem's shipyard not far away along Kill van Kull on Staten Island. The Goethals bridge can be seen through the haze. The car is reminiscent of PRR's classes F25 and FN/FNa/F37.



All 5 of these 1911-built cars were still in service in 1960

## Section 2 Diner Coming...



Bob Chapman's F-4bm diner

From Bob Chapman: After years in the stash for some of the cars, the B&O Metropolitan Special consist is now complete. (Well almost -- it has to share a baggage-mail car with the Cincy-Pittsburgh local consist. Not a horrible compromise, since the two trains would never be in CUT at the same time. It will get its own if I can turn up a Rivarossi/AHM 1920 baggage-mail at a swap meet.)

Following some upgrades to the Walthers modernized coach and 12-1 which they kindly sent me for helping them with their B&O passenger car line several years ago, the dining car is the last piece of the puzzle. Fortunately, NKP Car makes a nice prototype model kit of the F-4bm -- photo-etched sides, and custom cast resin roof and ends. Barring the possible baggage-mail car addition, this may be the last time I have to paint and letter that B&O B/G scheme; I won't miss it!

As things stand, the Met consist has the modernized coach, the dining car, the 12-1, and a bunch of assorted express cars B&O, a good representation of the train in the early 50s. In that era, it's even OK to run it behind steam on occasion.

I'll soon get an F-4bm mini-article in the mail to you for Modeler. It will be largely a photo feature, since the F-4bm shares most of the construction steps with the F-4bn, which I wrote up a while back. The new text will cover the F-4bm prototype and the construction steps unique to the F-4bm, mostly involving the roof detail.

[Bob's "mini-article" has been received and is in the queue for a future issue. JT]



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## B&O MODELING IN THE ENTHUSIAST PRESS

BY JOHN TEICHMOELLER

*We cite articles and product reviews from the enthusiast press of relevance to B&O modelers. We will particularly mention any evaluative comments that might be useful to purchasers or builders. Let us know if we have missed something.*

**“From Beeliners to Zephyrettes—Rapido Trains New Rail Diesel Car,”** by David Otte, *Model Railroad News*, May 2017, pages 44-56. Rapido released their “state of the art” Budd RDCs in 2017 (the “RDC-1,” coach version), and this review was very detailed coverage of this excellent model. The article included an elaboration of the history of the prototype and description of the model with 19 or so photos. Many roads bought these units including the B&O, commonly referred to “Budd cars.” Many readers have probably even ridden them in excursion or commuter service. My first adventure was as a teenager riding the Charlottesville-Newport News section of C&O’s Sportsman, ca. 1961. I was excited then disappointed to find the ride was noisy and not very comfortable. The review samples illustrated in the article were New Haven, British Columbia Railways and Canadian National. Rapido worked hard to make each version detail specific to each road. They also released the cars in B&O lettering but of course there was no discussion of the details on the B&O unit in the review. I haven’t heard much buzz on the B&O units. Perhaps the list price in excess of \$300 for the full featured (DCC & sound--oh yes, you will want the sound) scared off B&O fans. At any rate, this article is an excellent source of information about the technical aspects of the model. My TLC B&O diesel diagram book shows two variations of the RDC-1, so we invite readers who purchased the model and who are knowledgeable about B&O’s versions to offer their evaluation of its details.

**“Via Rail Canada Budd RDC.”** By Otto Vondrak, *Model Railroad News*, April 2018, pages 24-27. Another in-depth look at the model, in this case the review sample being VIA Rail. Rapido keeps rolling out prototype variations with detail differences in end windows, headlights, number boards, pilots, roof radiator blister, truck sideframes, horn packages, etc., but as with the earlier review this one has no pictures or discussion of the B&O unit to even intelligently comment upon. However, page 25 has a nice shot of the interior detail. Boy, those seats look as uncomfortable as I remember on the C&O. And you need to add some German passengers.

**“Alco’s F-unit Contender,”** by David Otte, *Model Railroad News*, April 2018, pages 46-55. This is a review of Rapido’s FA units and includes coverage of B&O’s FPA-2. We published the “offering/reservation notice” for this model in *Modeler* No. 43. The B&O review sample illustrated is No. 4013, painted in the blue and gray scheme. The reviewer summarizes previous HO-scale model offerings of FAs over the years and concludes that “none of the manufacturers to date have attempted to cross the threshold of rivet-counter worthiness—that is until now.” Rapido continues their practice of replicating road-specific details. The review covers one of the units equipped for passenger service with steam generator roof details and an underbody water tank. Rapido also produced the straight freight FA-2. One visible variation present on the B&O model illustrated is the pair of louvers on each side of the nose Capital Dome emblem. These were added to improve crew cab comfort by redirecting traction motor blower air. The article notes that while the “as issued” model has a painted-on Capitol Dome insignia on the nose, the box includes a “pre-painted photo-etched HO-scale replica of the medallion...for optional consumer application.” Again, we invite knowledgeable readers to offer appropriate comments on any detail discrepancies, keeping in mind that details are a moving target with time as physical modifications took place. I roster an A-B set of the old Proto 2000 units in the blue and black scheme (although it is sidelined awaiting replacement of cracked axle gears and application of Archer decals for those nose louvers); I would have been sorely tempted to acquire one of the Rapido offerings if the B&O’s FAs hadn’t been traded in some months before my modeling period. If and when Rapido issues the blue and black scheme with nose MU receptacles, temptation will raise its ugly head, for sure, and maybe I’ll time cheat. The reviewer spoke with Jason Shron, president of Rapido, who assured him we have not seen the last of Rapido’s FA offerings.

**“The Path to the Buffalo & Pittsburgh,”** by Jon Percy with photos by Dan Munson, *Railroad Model Craftsman*, March 2018, pages 46-55. This N-scale model railroad represents a portion of surviving B&O in western New York in 1988-89. The multi-level track plan includes representations of signature locations including Butler, New Castle, Machias, Johnsonburg, Falls Creek and Bradford in the main part of the basement room which measures 32’x42’. This is quite an impressive track plan; nevertheless, despite the space given and being in N-scale, I guess there just wasn’t space to



represent the steel mill in Butler (the Pullman Standard plant closed in 1982). What if you find yourself intimidated by this large and involved model railroad? Well, for someone with less space or energy, the design includes the “Northern Sub” branch to Karns City and Petrolia that we saw some years ago at the Butler convention in 2008. With some neat wooden trestles, this would make a fine shelf-style model railroad going around 3 or 4 walls of a family room.

**“Mountains & Coal,”** by John Listerman, photos by Lou Sassi, *Model Railroader*, January 2018, pages 46-53 This model railroad is a freelanced representation of the B&O south and west of Cumberland in the steam-diesel era. It is single level and occupies a space of 32’x35’. There are lots of hopper cars and lots of trees. In fact, page 51 shows how Mr. Listerman makes his “quick and easy trees.” Freelanced versions of Fairmont, Grafton and Benwood Junction are depicted.

**“Bachmann Trains: Santa Fe GP30,”** review by David Otte, *Railroad Model Craftsman*, May 2018, pages 24-27. This review compliments the one we cited in *Modeler* No. 46 by Tony Cook in *RMC’s* sister publication, *Model Railroad News*, February 2018. The review sample is Santa Fe, but the review itself has some value for those interested in the B&O version of this model from comments on some of the model’s features. It notes that even though the basic tooling dates back to Lionel, the current run does have improvement in addition to being “sound value/DCC equipped.” Otte, as with the Cook review, also has a section on working with the model’s DCC suite. He concludes by acknowledging that this is an attractive-looking model that trades off some prototypical fidelity for economy. And, again, the B&O’s 77 GP-30s did not have the extended fireman’s side cab on this model for those unwilling to compromise.

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## SCRATCHBUILDING AN I-16 CABOOSE IN STYRENE, OR... BUILDING THE PRO CUSTOM HOBBIES I-16 KIT BY BOB CHAPMAN



B&O I-16 #2782 was scratchbuilt in styrene, based on components from the Pro Custom Hobbies wood-and-metal kit from 1981; the scale is HO.

In 1981, Pro Custom Hobbies released its kit for B&O's class I-16 bay window caboose. Having seen (and photographed) a few of the prototypes in action in the 1950s, I hurried to my local hobby shop to order one.

It soon arrived, and upon opening the box, I was greeted with an array (in no particular order) of over 80 wood and white metal parts; the first instruction required application of two coats of Scalecoat sanding sealer to each wooden part. There were easier projects waiting in my stash, and the I-16 went into my "someday" stack.

Well, it's 2018, and "someday" has arrived. A lot has happened in the hobby in 37 years. Except for a few narrow-gauge guys who value the look of heavily weathered natural wood, wood-and-metal kits have become obsolescent. Styrene, with its variety of precision sheets and strips along with simple workability, has become the material of choice for most craftsman projects.

As I studied the kit, the mental lightbulb flashed. I could copy each of the kit's wooden parts in styrene, and create a more easily assembled styrene project. And – the kit's white metal castings would still be useful in this new approach.

### **The Prototype**

As traffic increased during World War II, the B&O found itself short of cabooses. Lacking available steel for new cabooses such as the highly successful I-12 wagontops, B&O management hit on the alternative solution of converting obsolescent boxcars to cabooses by adding a bay window to each side, and opening each end for an end platform.

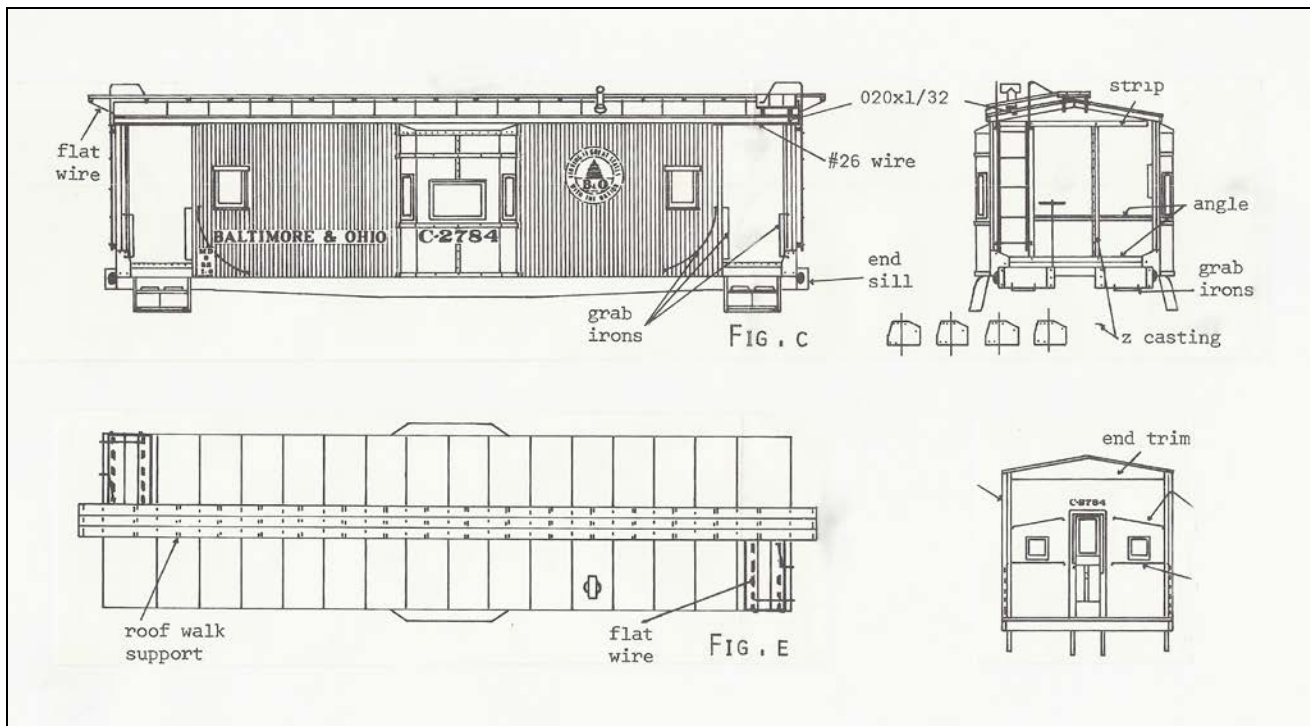
Available in 1942-43 were 175 boxcars of 1910 vintage in classes M-13, -13a, and -13b. The conversions were made in six batches, spread across three of B&O's shops – Mt. Clare, DuBois, and Washington (Indiana). Because of this, there were minor detail variations, such as riveted vs. smooth-sided bay windows; modelers are encouraged to match their model to an appropriate prototype photo.

The I-16s were assigned into number series C-2300 through C-2374 and C-2700 through C-2799. As B&O's lettering schemes evolved, the I-16s evolved with them; photographs show the I-16s in at least a half-dozen different lettering variations.

As new postwar cabooses arrived, the I-16s were redeployed to yard and transfer service, or put out to pasture in MofW service. The last I-16 was retired in 1977.



A true legacy photo – a fuzzy view of I-16 #2782 in Cincinnati circa 1950 shot with my Brownie camera. Behind me on the Toledo Division is the lumber yard where Dad worked at the Hamilton Avenue crossing, and it was a fun place to hang out and trainwatch on a Saturday. The day's thrill would be the early afternoon manifest storming upgrade from downtown headed by a pair of Big Sixes; #2782 is more likely trailing a transfer run from the Hopple Street yard to Ivorydale. Photos by author



Scale drawings from the Pro Custom Hobbies I-16 kit instructions.





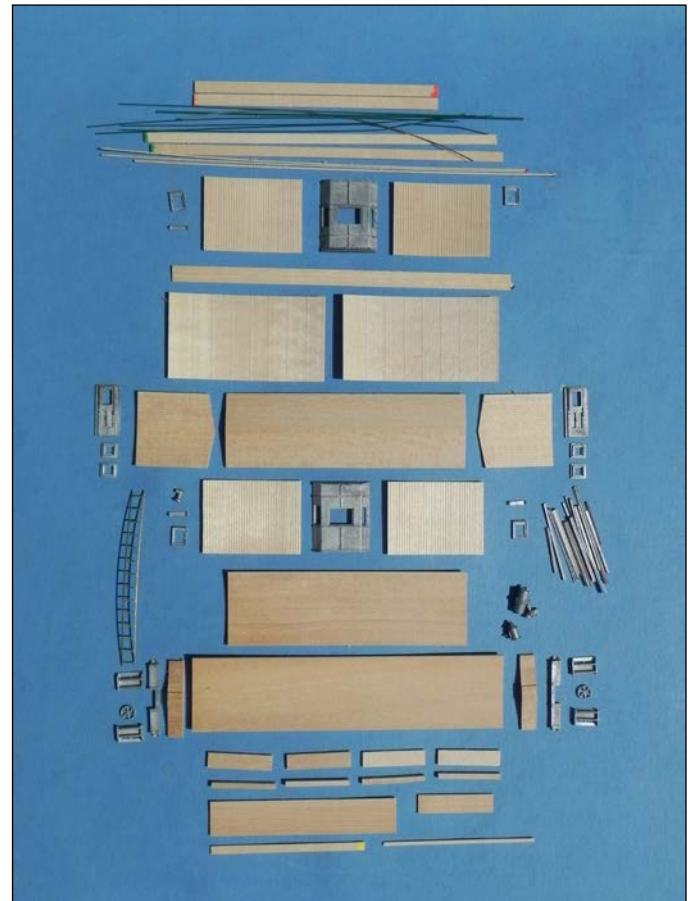
## **The PCH Kit**

For its era, the PCH kit is outstanding. The kit is well-thought-out, with basswood components sized as closely to scale as the era's English-sized dimensional stripwood would allow. Precut items are precisely cut to the required scale dimensions. Accurate custom castings in white metal are provided for such key components as the bay windows, doors, window sashes, platform steps, and end supports.

Instructions fill a single oversized page, complete with scale drawings of the prototype as well as construction diagrams. A logical construction sequence is clearly presented in the text, with help from the diagrams. I was a bit taken aback by the instruction's reference to the bay windows as "cupolas" – but then again, I knew what they meant.

It's my belief that the 1981 PCH kit migrated to the Quality Craft Models product line in 1985, then to Gloor Craft Models in 1988.

Let's begin our project to remake and build the PCH kit; those scratchbuilding or using a different starting point are welcome to follow along.



The Pro Custom Hobbies I-16 is a classic wood-and-metal kit, including over 80 parts.

## **General Approach**

For the most part, we'll replace the basswood components with matching styrene parts; an exception is the wood subroof, uniquely shaped and hidden from final view.

In contrast to the kit instructions, we'll build the kit with roof removable until after painting. This will allow separate painting of the dark green window sashes and doors, and last-minute installation of window glass after the red carbody is painted.

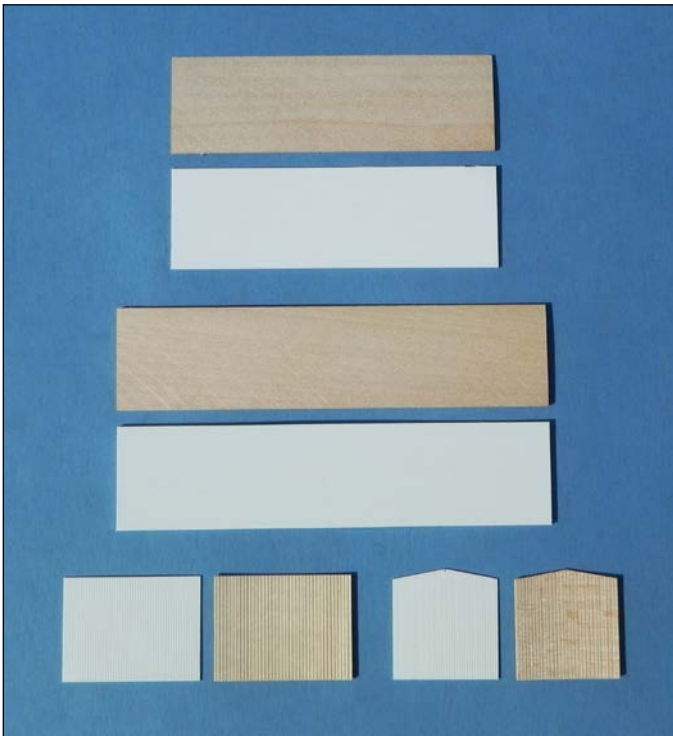
## **Cut and Assemble Styrene Sides, Ends, and Floor**

The kit's basswood sides and ends are 1/32" thick with about .040" groove spacing. While it's possible that some prototype cars were built with this wider groove spacing, the more common prototype board width appears to better match .030" spacing. We'll use .020" thick Evergreen #2030 sheet for the replacement sides and ends.

Using the basswood parts as patterns, cut new styrene sides and ends. For the scratchbuilders -- the sides are 11'9" wide and 8'9" high; note that the width allows some extra material to be trimmed when the sides are fitted to the carbody. The ends are 8'9" wide; height is 8'5" at the edges and 9'3" at the peak.

Replace the floor with .060" styrene (#9060) 37'0" long by 8'9" wide. Replace the inner floor spacer with .030" styrene (#9030) 28'4" long by 8'9" wide; note that the inner floor spacer should be exactly the same length as the wood subroof. Notch the inner floor spacer 3'0" x 6" to clear the end door castings. Glue the inner floor spacer to the floor, centering it between the ends.

Cut a door opening 2'2" wide by 6'3" high in the center of the end. Test fit the door casting into the opening.



While the PCH wood-and-metal kit is an excellent kit for its era, I elected to update the kit by copying its wood parts in styrene.

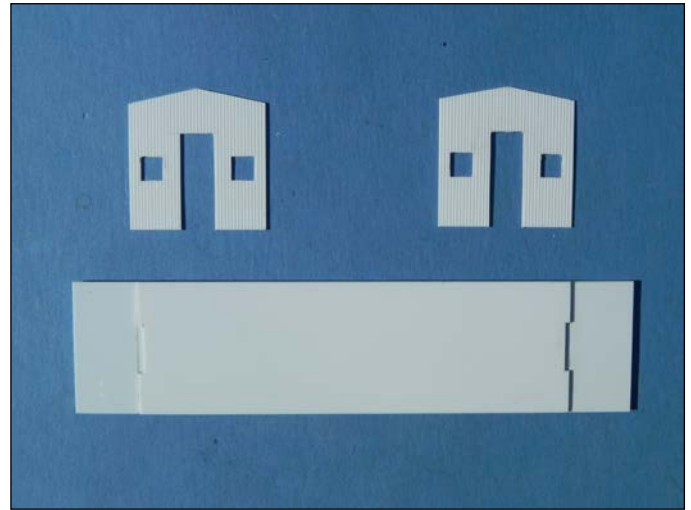
Cut window openings into the ends. Tip – an easy way to do this is drilling a series of small (@ #50) adjacent holes around the interior perimeter of the opening, popping out the waste piece, and finishing the opening with a small file. The windows are 3'3" from the bottom of the ends, 1'1" from the door opening, and 18" square. Test fit the window sash casting into the opening. We'll glue the castings into the opening after painting.

Glue the ends to the floor, butting them against the inner floor spacer. Be sure that they are perfectly perpendicular to the floor.

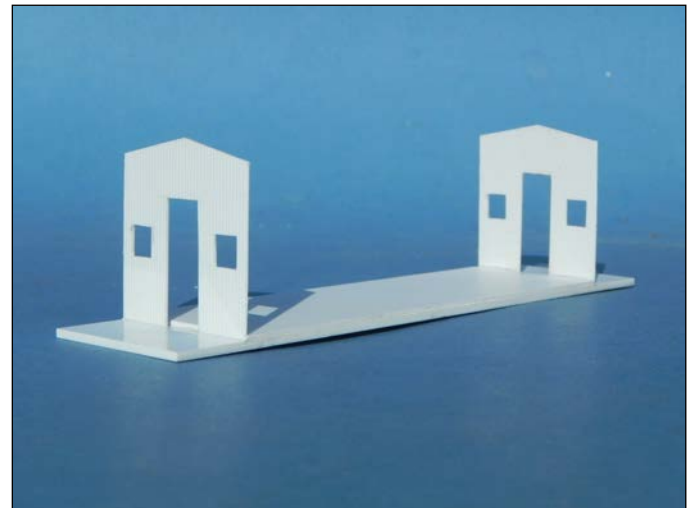
### **Add the Subroof and Side Braces**

We'll use the wood subroof as supplied in the kit; it has the correct needed shape, and promises little risk of warping. The subroof is supported and positioned by a brace at each corner of the carbody. A pair of side braces is used on each side of the carbody center to support the siding and the bay window.

Cut four corner braces from .060" x .060" styrene (#153) 7'6" long; glue them into each corner of the carbody. Place the subroof atop the corner braces, and tack it with a small dot of CA to the inside of the end peaks; we will later want to remove the subroof, so use the CA



Door and window openings have been cut in the ends, and the notched inner floor spacer has been glued centered on the floor.



The ends have been glued to the floor, butted against the inner floor spacer.



The corner and side braces have been installed. The wood subroof is temporarily installed, but for access to the interior will not be glued until after painting.

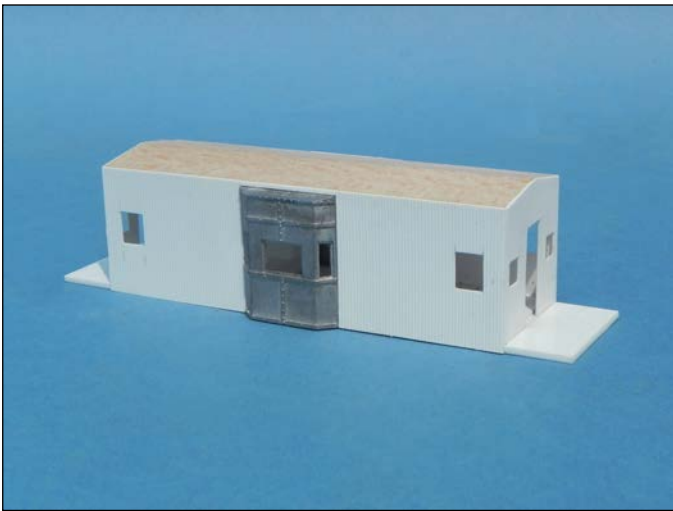
sparingly. File the top of each end to exactly match the contour of the subroof.

Cut four side braces from .060" x .125" styrene (#156); test fit them between the inner floor spacer and subroof for a snug fit. The side braces need to line up exactly flush with the edges of the floor and the subroof. Cut four lateral spacers from .060" x .125" styrene about 8'0" long. Trim the spacers for precise spacing of the side braces.

The side braces and their accompanying lateral braces are centered on the carbody 6'0" apart. Mark the lateral brace locations on the top of the inner floor spacer, and glue them centered between the edges of the inner floor spacer. Glue the side braces, butting their bottom against the lateral braces. Insert the top lateral braces between the side braces, and glue their ends to the side braces; do not glue them to the subroof.

### **Assemble the Sides**

If you lack the kit's bay window casting, it can be scratchbuilt from styrene. The inside edges of the bay window casting are 6'8" wide by 8'4" high. The outside edges of the casting are 5'8" wide by 8'2" high; with the roof mildly pitched toward the outside. Excluding the sash, the window opening is 3'2" from the bottom of the bay window casting and is 2'10" wide by 2'3" high.



Windows have been cut into the sides, and the sides and bay window glued to the carbody.



The end platform is glued atop the floor, with styrene spacers under each side of the end platform.

File the vertical edges of the bay window casting flat so that they will butt cleanly against the siding. From inside the carbody, glue the bay window casting to the side braces and the sides of the floor, precisely centered on the carbody; do not glue it to the subroof. Tip – use small dots of rubber cement to allow precise positioning of the bay window casting, then follow by CA to secure the joints.

Next, we'll install the styrene sides; note that they are a bit oversized in length, and will be cut to a precise fit before installing them. A single window must be cut in each side piece 7'9" from the bay window and 3'6" from the bottom of the side; the window opening is 1'9" high and 2'2" wide. As with the ends, make the opening with closely spaced drilled holes, followed with a small file. Test fit the white metal sashes; and then file the openings until they are a snug fit. We'll install them after painting.

Trim the outer ends of each side piece to fit between the bay window casting and flush with the outer surface of the end. Align the side piece flush with the bottom of the floor, then reach inside the carbody to glue the side piece to the corner braces, side braces, and edge of the floor; do not glue to the roof. Cut a filler strip from .020" x .040" styrene (#122) to fit between the side pieces above the bay window casting. With a file, remove any of the side pieces or filler that extends above the plane of the subroof.

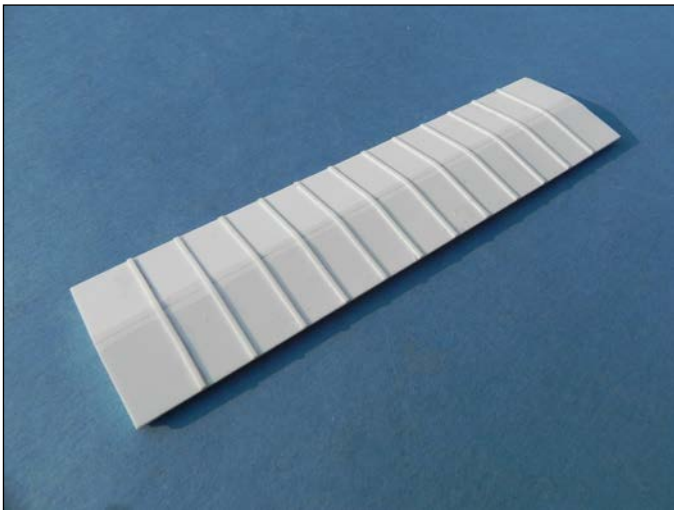


To each side of the end platforms, add a filler piece of .020" x .060" styrene (#123) 4'2" long. To the top of the end platform glue a piece of .030" scribed siding .020" thick, sized 9'0" x 4'2". File any overhang of the trim pieces and the siding flush with the floor. Under each bay window is a pair of triangular braces; cut them from .020" x .080" x 1'0" styrene strip (#124) and install them.

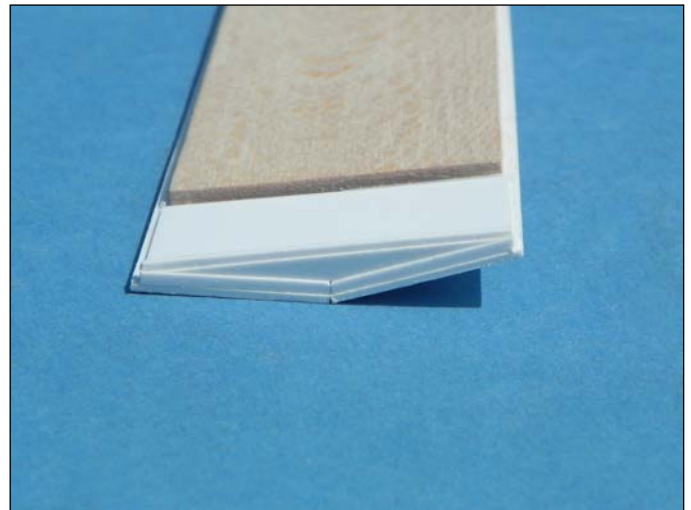
### **Build the Roof**

Remove the subroof from the carbody by slitting the CA joints at the top of each end. Cut a roof from .030" styrene 9'6" x 37'4"; make a shallow knife cut along the centerline, and bend it to form a peak. Glue the roof centered on the subroof. Cut spacers to support the roof end trim from .020" styrene sheet (#9020), 9'0" wide, and length about 4'0", trimmed to provide clearance for the carbody end between the subroof and the spacer, and 6" space for the roof end trim layers.

The roof end trim is complex, formed of many layers. The lowest layer is a .030" x .156" strip (#137). Trim it to match the taper of the roof, and glue it to the end of the roof spacer. Add a similar but shorter trim layer above the first layer; cut it from .010" x .125" styrene (#106) x 9'0"; trim it to match the taper of the roof, and glue it atop the first layer. The final layer is a soffit trim piece cut from .020" x .040" styrene strip; cut two pieces for each end, and glue them atop the second layer following the peak of the roof's underside. We'll add the soffit side trim to the roof during final assembly after painting.



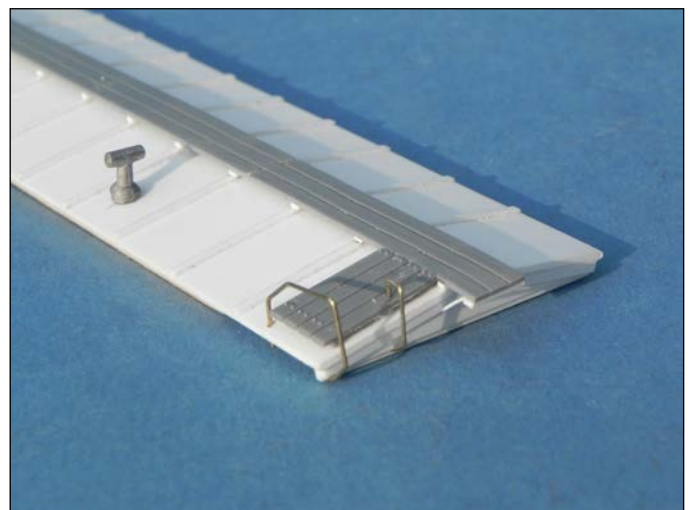
The roof is styrene sheet glued to the wood subroof; note the flattened peak, to simplify installation of the running board. The seams are styrene strip.



After gluing the styrene roof to the wood subroof, end trim can be added.

As a concession to modeling convenience, I like to flatten the peak of a roof before adding the running board supports. Flattening the peak avoids the need to make each support concave to fit over the peak. The peak can be easily flattened by dragging the roof across fine sandpaper resting on a flat surface.

It's unclear from prototype photos the exact spacing of the roof seams; I used the typical spacing of the M-13's era of 33". Lay out this spacing on the roof, cut a dozen .015" x .040" (#112) strips slightly long at 9'9", and glue them to the roof. A small square will help assure that they are perpendicular to the edge of the roof. Trim the ends of the strips flush with the edge of the roof.



The roof is styrene sheet glued to the wood subroof; note the flattened peak, to simplify installation of the running board. The seams are styrene strip.



The kit's wood running board is oversized at 2'0" wide. I replaced it with Tichy's #3029 styrene running board. Trim the length of the Tichy part to 40'0". Underneath each end, glue a lateral crosstie .020" x .040" x 1'8" flush with the end of the running board. Replace the lateral running board support cut away when the running board was shortened with a strip of .010" x .060" x 1'9" styrene strip (#103). File away the rivets atop the running board; they are now wrongly positioned.

Flatten the top of the seam strips to match the 1'8" width of the Tichy running board. Cut running board supports from .020" x .040" styrene 1'8" long and glue them atop the seam strips. Tip – precisely position and glue the supports at each end first, then tape a straightedge butted against their ends to align the rest. At the ends of the roof, glue a .030" x .040" (#132) support flush with the carbody end. Level the tops of the supports by lightly dragging them across fine sandpaper on a flat surface.

Glue the running board to the supports and the lateral running boards to the running board and the surface of the roof. Running board end support braces run between the back of the end lateral crosstie and the bottom of the fascia trim; cut a pair for each end from .010" x .020" styrene (#100) and glue them in place. Install the roof's die cast smokejack 26'6" from the end and 1'3" from the side.

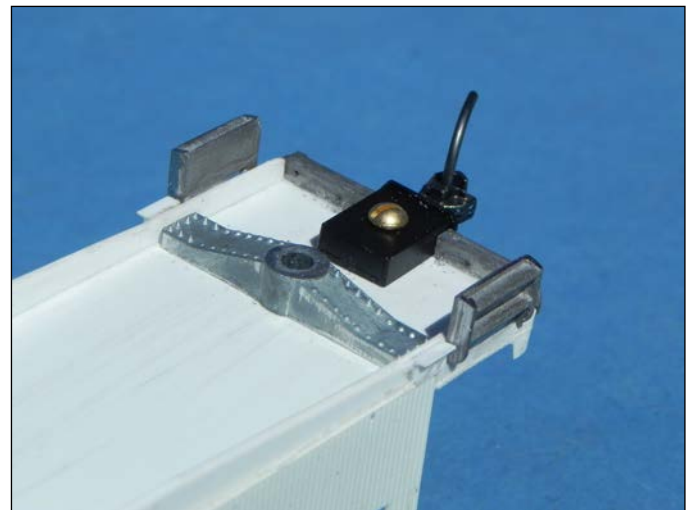
Using photos as a guide, bend roof ladder grabs from .015" wire; I drilled holes in the roof to secure each end. In my experience, brush painting these yellow after assembly doubles their diameter, so I prefer to spray paint them separately and then install them after painting the carbody. If this is your preference, test fit them now but set them aside; otherwise, glue them in place.

### **Build the Underbody**

The prototype I-16 makes continued use of the original sidesills of the M-13 boxcar carbody; these components were pressed steel, with their flanges facing inward. Shape the sidesills from .040" x .156" styrene strip (#147). The deep center section is 8'0" long, while the shallow end sections are 5'0" long; the end sections are 8" deep. With a file, slightly round the bottom edge of the sidesills representing the curved edge of the pressed steel part. Glue them to the floor, inset by the thickness of the wood siding.

At each corner of the end platform is a gusset which bends around the platform corner to brace the corner posts. Using the photos as a guide, scratchbuild these from .005" styrene sheet (#9009). (Note –if I were building the model again, I would use shim brass for the gussets; the .005" sheet proved weak during gluing.) Height is 1'3" and overall length 1'9", with the bend from side to end about 10" from the outside edge. Shape the gusset with diagonal cuts, bend them, and glue them to the corners of the platform. Glue a .005" spacer to the end of the floor between the gussets to provide a firm mounting surface for the endsill.

I used the PCH die cast endsills on my model, but they are easily scratchbuilt from .060" x .156" styrene strip; you'll want to add poling pockets at each end, available from a donor carbody in your scrapbox. Drill (#76) for Westerfield #1197 18" drop grabs near the bottom on each side; we'll add the grabs after painting. Glue the endsills to the end of the floor with the coupler pocket opening flush with the bottom of the floor.



Sidesills, endsills, steps, jacking pads, bolsters, and couplers complete the underbody. With the deep sidesills and normal viewing, there is no reason to add brake system detail.

Test-install the coupler pockets and couplers; I used Kadee #158 scale couplers for my model, but Kadee #5's work just as well. I filed the coupler pocket detail from the face of the endsills, using the Kadee box detail to replace it. You may need

to slightly widen the endsill opening for the Kadee box to fit. Drill (#50) and tap for a 2-56 screw and install the coupler box.

I substituted some die cast Red Ball bolsters from my parts stash for the wood bolsters in the kit. The wood bolsters will work fine, or styrene pads can easily be scratchbuilt; a thickness of about 1'2" will give a correct coupler height. Glue the bolsters centered 4'6" from the end of the floor.

The prototype M-13 boxcars were built with arch bar trucks, some of which survived the I-16 rebuilding. In several other cases, the arch bars were replaced with Andrews trucks, and in a few cases with AAR ("Bettendorf") trucks; I opted for Accurail #166 Andrews trucks. Test-install the trucks and check coupler height.

The underbody brake components, piping, and centersill are not visible in normal operation, and I chose not to model them. If you prefer to add them, now is the time.

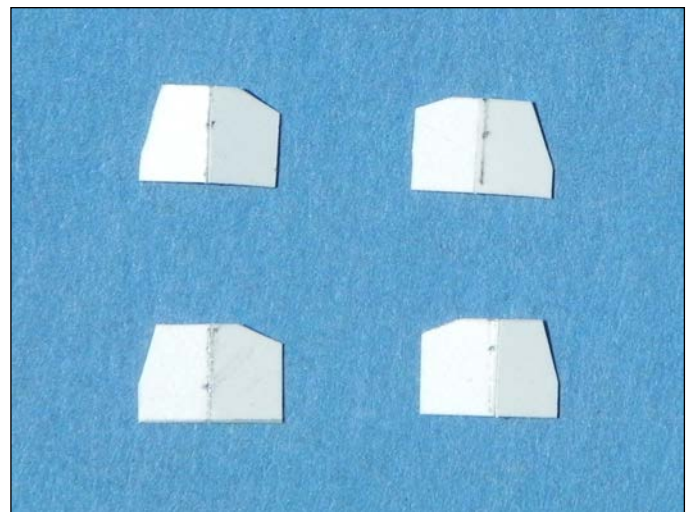
On the prototype sidesills is a visible detail – jacking pads (an iron casting) on the outside of the sill beyond the ends of the bolsters. I scratchbuilt these using a back plate of .020" x .080" x 1'3" styrene strip. The bottom plate is .015" x .040" strip glued to the back plate in an L-shape. A pair of triangular ribs cut from .015" x .040" completes the jacking pad assembly. Glue the assembly to the sidesill 3'9" from the end of the sidesill.

Glue the kit steps next to the jacking pads. If scratchbuilding them, they are 3'0" wide by 1'11" high. On the prototype, on the outboard face of the lower step is an opening covered by a metal flap allowing lubrication access to the truck's journal; I represented this with a .010" x .060" x 1'0" styrene strip. Check the ability of the trucks to pivot on your curves; mine were OK, but if the steps interfere, a few strokes of a file on the outboard journal boxes may be needed.

### **Add End Detailing**



While there's clear access to the end, we'll drill for the grabs, which we'll install permanently after painting. The corner gussets are in place, ready for the corner posts.



Corner gusset detail.

While there is access before adding the end roof supports, drill for the carbody grabs. The slanted end grabs are Detail Associates #6605; the outer end is estimated at 5'6" above the end platform, and the inner end at 6'0". The L-shaped end grabs are DA #6504; the upper hole is about 3'0" above the end platform, and the lower hole about 3". The curved side grabs are DA #6503, with the upper hole at the same level as the L-shape end grab, and the lower hole about 3" above the bottom of the side. As with the roof grabs, we'll hold off gluing them in place until after painting.

Drill the endsill for DA #2206 eyebolts supporting the uncoupling lever, and glue them. Since the lever is red body color, we can install it now; bend the lever from .015" wire and install it in the eyebolts.

### **Build the End Structure**

The modeler has three choices for fabricating the end structural components: 1) use the die cast parts supplied with the PCH kit, 2) build the structure from styrene strips and angles, or 3) solder the structure from brass strips and angles. Number 3 is probably the best way to do it; you'll be able to use correct scale-sized angles and strips, and the resulting structure will be sturdy. I opted for #2, since I had the styrene strips and angles on hand, and since solvent glue would result in a secure joint between the structure parts and the styrene carbody. In some cases I compromised with strips instead of the prototype's angles and in some cases used slightly heavier parts than the prototype's.



Corner posts and railings complete the end structure. Note that they are glued only to the floor with the roof removable until after painting.



Completed carbody, ready for painting. The roof is still temporarily installed.

In service, the I-16's had two different types of angle corner posts running from the platform to the roof – either the original wood siding from the M-13 about three boards wide in each direction, or a steel angle about the same size. For my model, I opted for the angle, cut from Evergreen .080" angle (#292). The corner post runs from the corner gussets at the floor to the inside of the soffit trim at the roof, and is about 8'0" long. Test fit each corner post to be sure it is perfectly vertical in both directions; my model had a slight measurement difference in the roof vs. the floor, requiring a shim inside the gusset. Glue the bottom of the corner post to the gusset, but leave the top unglued so that the roof will continue to be removable. Allow the joint to dry, while checking to make sure the post continues vertical.

A few inches above the floor between the corner posts is a kick plate strip; I represented it with .020" x .040" styrene strip, glued behind the gussets.

A horizontal center rail runs between the corner posts 2'10" above the floor. Cut a .020" x .040" x 8'9" styrene strip, and glue it inside the corner post angles.

A post runs vertically 3'2" from the outside of the right hand corner post; cut a .020" x .040" x 7'8" strip and glue it to the inside of the kick plate strip and the outside of the center rail; be sure the strip is perfectly vertical. As before, do not glue it to the roof.

A second thinner vertical post runs 2'2" from the outside of the left hand corner post. Cut a .020" x .030" x 7'8" strip (#121) and glue it similarly to the right hand post.

The brake staff is 3'0" from the left edge of the floor; drill (#74) through the floor just inside the joint with the endsill (drill from the bottom). The brake staff is .020" wire. The brake wheel and ratchet/pawl plate were harvested from Tichy AB brake parts sprues (#3013). Insert the brake staff, slip the ratchet/pawl onto the brake staff and glue it to the floor and then install the brake wheel 3'9" above the floor.

To the right is the platform brake pipe extension. I approximated this part with a piece of .020" wire with a jog bent into its top end. Some I-16s were equipped for on-the-fly uncoupling in helper service with a chain to the uncoupling pin, an extended lever to turn off the angle cock, and a rod to the glad hand. I elected to omit these details from my I-16, since it will operate on the west end of B&O's system well away from helper districts.

The PCH kit provides vintage stamped brass ladder stock which I set aside. There are numerous options here, but I chose Tichy ladders (#3033) which have about the correct rung spacing. Using the photos as a guide, trim them to fit the carbody, but set them aside for installation after painting.

On the corner posts are marker lamps (Precision Scale #31334) and a 36" grab. I'll install these after painting. Note – other markers such as Cal-Scale will also work.

Install the kit's die cast window awnings (or make your own from thin cardstock). The model is now ready for painting.

### **Painting and Lettering**

To remove skin oil, wash the carbody with a non-oily detergent such as Ivory Liquid. Wash the top of the roof, avoiding water on the wood subroof.

Paint the underbody, sidesills, and trucks grimy black. Mask the sidesills, and paint the carbody and roof Caboose Red (I used some out-of-production Floquil from my remaining supply). Note that the endsills are black on some cars. This also a good time to pre-paint red .020" x .040" side fascia strips cut the length of the carbody; we'll install them after gluing the roof. Also paint red a .010" x .020" strip which we'll cut and install later as drip edges. If using Floquil or other flat finish paint, overcoat it with gloss for a smooth decaling surface.

Paint the separate window sash castings a Pullman Green hue. My Floquil Pullman Green looked a little dark to my eye, so I tinted it with 20% Reefer White. Tip – use a Popsicle stick with double-sided tape as a handle for holding the window sashes while painting them.



A scrap of decal painted Pullman Green and cut into narrow strips makes it easy to achieve a sharp edge between the green window sash and the red carbody. A few licks of green will touch up the inner edges of the sash.

On the bay window, the window sashes are cast integral with the bay window casting. Tip – for a sharp edge between the window sash and the carbody, spray a light coat of Pullman Green on a scrap of unlettered decal sheet, then cut a thin "stripe" to decal the face of the window sash. Touch up any un-decaled areas inside the sash window frame with a brush. Paint the grabs, ladders, and markers Reefer Yellow. Tip – press the ends of the grabs into a 1/4" x 1/4" stick of balsa to hold them while painting.



The PCH kit includes a custom decal sheet for the I-16, but the 37 years in the stash had taken its toll. Upon immersion, the decal film disintegrated; it possibly could have been restored with a coat of decal saver, but I instead moved on with a set of out-of-production Champion #HC-124 B&O caboose decals from my decal stash. At this writing, Microscale offers a B&O caboose set with many lettering options. Mt. Vernon Shops offers an I-12 set in yellow and white, but the website image of the set shows no car numbers for the white variation.

I elected to go with the 1948-55 era lettering for my I-16. On the prototype, there are minor positioning variations for the lettering elements. For the road name and car number, I went with 2'0" above the bottom of the side, and 4'0" for the herald. Correct numbers for the I-16 are #2300-2374 and #2700-2799; I of course numbered the model for "my" I-16 -- #2782. Note that some cars included the dash after the "C" in the car number, and others did not. The end numbers can go either over the door or the right hand window; I placed mine over the door. My decal set did not include the grouping of small data covering build date and class number which appears on the lower left corner of the side, so I omitted it. Repack data on the lower right was harvested from a B&O freight car set.

### **Final Assembly**

Before gluing the roof, glue the window frames and end doors from inside the carbody. Add window glass. Add weight if desired; my model weighed 3.0 ounces vs. the NMRA recommendation of 3.5 ounces. I elected to leave the weight as-is, since the car will always be at the end of the train on my layout. It's also a good time to install the grabs on the carbody end, before the roof restricts access. With these steps completed, glue the roof to the carbody.

Glue the pre-painted .020" x .040" side fascia trim strips the length of the carbody under the edge of the roof. Cut the pre-painted .015" x .020" strip to four 4'3" drip edge sections, and glue them flush with the bottom edge of the side fascia centered above the end platforms. Glue the upper ends of the corner posts and end posts to the inside of the side and end fascia strips; check to make sure all are perfectly vertical.

Drill the corner posts for the grabs and marker lamps. Install all remaining grabs; the bottom of the markers is about 6'3" above the bottom of the sidesill. A final detail is the air brake bleed lever poking through the sidesill below the bay window; form this from .015" wire with a right-angle bend.

Paint the edges of the platform stair treads yellow and the smokejack black. Check the carbody for any other areas needing touchup, then seal everything with a final coat of Dullcote. Weather your car as desired. In line with my idealized memory of B&O cabooses being well-maintained, I went with a very light coating of soot, a bit heavier on the up-facing surfaces.

Install trucks and couplers, and she's ready to add a distinctive ending to your next B&O freight.

### **References**

"B&O Cabooses, Photos and Diagrams," Dwight Jones, Walsworth Publishing Co., 1998.

"Cabooses of the Baltimore & Ohio Railroad," Robert Hubler, B&ORRHS, 1994.

"War Emergency Cabooses, Part II, B&O's Class I-16 Caboose," Chris Tilley, *The B&O Modeler*, July/August 2011.



Closeup of trailing end detail; note the result of the extra effort to achieve crisp color separation.



End view illustrating layout of end detail.



Elevated view of I-16 #2782; the roof was weathered with a light coating of soot to represent steam-era appearance.

## Parts & Supplies Needed

| Manufacturer      | Part No. | Description                         |
|-------------------|----------|-------------------------------------|
| Accurail          | 166      | Trucks, Andrews                     |
|                   |          |                                     |
| Detail Associates | 2206     | Eyebolts                            |
|                   | 2505     | Wire, .015"                         |
|                   | 2506     | Wire, .019"                         |
|                   | 6503     | Caboose Side Grabs                  |
|                   | 6504     | Caboose End Grabs                   |
|                   | 6605     | Grabs, 36"                          |
|                   |          |                                     |
| Evergreen         | 100      | Styrene Strip, .010" x .020"        |
|                   | 103      | Styrene Strip, .010" x .060"        |
|                   | 106      | Styrene Strip, .010" x .125"        |
|                   | 112      | Styrene Strip, .015" x .040"        |
|                   | 121      | Styrene Strip, .020" x .030"        |
|                   | 122      | Styrene Strip, .020" x .040"        |
|                   | 123      | Styrene Strip, .020" x .060"        |
|                   | 124      | Styrene Strip, .020" x .080"        |
|                   | 132      | Styrene Strip, .030" x .040"        |
|                   | 137      | Styrene Strip, .030" x .156"        |
|                   | 147      | Styrene Strip, .040" x .156"        |
|                   | 153      | Styrene Strip, .060" x .060"        |
|                   | 156      | Styrene Strip, .060" x .125"        |
|                   | 292      | Styrene Angle, .080"                |
|                   | 2030     | Styrene Sheet, .020", .030" Spacing |
|                   | 9009     | Styrene Sheet, .005"                |
|                   | 9020     | Styrene Sheet, .020"                |
|                   | 9030     | Styrene Sheet, .030"                |
|                   | 9060     | Styrene Sheet, .060"                |
|                   |          |                                     |
| Tichy             | 3013     | AB Brake Set                        |
|                   | 3029     | Running Board                       |
|                   | 3033     | Ladder                              |
|                   |          |                                     |
| Westerfield       | 1197     | Grabs, 18" Drop                     |
|                   |          |                                     |
| See Text          |          | Caboose Decals                      |
|                   |          | Marker Lamps                        |

## PROVENANCE OF AN ANTIQUE

BY JOHN TEICHMOELLER

Chris Tilley shared his techniques for scratch building an I-16 caboose in the July-August 2011 (Vol. 7, No. 4) issue of *The Modeler*. I followed in the 1<sup>st</sup> Qtr. 2014 (Vol. 8, No. 1) issue with a story of how I did it the easy way: my friend Will Jamison had acquired a built-up Pro-Custom I-16 at an auction and had offered it to me for a nominal price. Craftsmanship was quite satisfactory, probably at least as good as I could do, so I accepted his kind offer. It was missing one of the step castings which I stole from my unbuilt I-16 kit. There was writing on the underbody in white fine tip marker, "PURR 481."





Some readers may be old enough to remember Bud Sima and his Prospect & Upper Ridge Railroad (PURR). Bud lived on Prospect Ave. in the Baltimore suburb of Catonsville. His model railroad was "inspired by" the Maryland and Pennsylvania. He was one of those modelers who didn't want to have to put up with nitpickers criticizing non-conforming Ma and Pa features so he adopted his "private" road name. It was featured at least twice in the enthusiast press, I think once in *MR* and once in the *NMRA Bulletin*. The model railroad included, as its major feature, a remarkably convincing replication of the Ma and Pa's Baltimore terminal. (Some of this is still extant--the stone roundhouse is used for city salt storage, and the freight house is used by the Baltimore Streetcar Museum.) The model railroad had a stylized cat as its logo as apparently Bud was a cat lover. He died ca. 1987, I think, and I never heard what happened to his layout and "stuff."

So when I saw PURR 481 on the bottom of the car, I couldn't help but wonder if there was a "Sima connection." I looked at the several articles on the PURR to see if a C-2774 appeared in any of the photos, and I didn't see it.

A few months ago I was rummaging through my photo notebooks looking for photos of B&O dump cars for an article Mike Shylanski was working on. The non-revenue notebook also has the caboose section. It is one of those big notebooks that you can only turn a few pages at a time, so I found myself slowly grinding through the caboose section to the non-revenue section. I came across a double-sided yellow-edged sales flyer containing the various offerings from the old Pro-Custom Hobbies. This was when Joe Lubber ran the store on the north side of Frederick Rd. in Catonsville and one in Colorado. Pro's mascot, "Ralphie the Rhino," hadn't been shot by a white hunter. The flyer is annotated 5/83 which must have been when I picked it up. In the upper right corner was a feature advertising their I-16 kit. It had a photo of a built-up kit numbered C-2774. The caption says the model car was built by Bud Sima. Perhaps the underbody annotation 481 was Bud's way of indicating he built it in April of 1981. So I guess my I-16 is an historical relic after all!

**OM HOBBIES**  
742 Frederick Road  
Catonsville Maryland 21228  
301 788-8773



B&O I-16 baywindow caboose kit made for us by QUALITY CRAFT MODELS complete kit less trucks and couplers, with decals.....\$9.95  
Model built by BUD SIMA

I-16 Used Andrews through the merger, but we haven't got Chessie System paint job photos. The I-1's and I-5's can have as few as one window and be built plywood sheathed. The I-16 can be about the same. We sell them, less trucks & couplers, with Decals for \$9.95 each. We have built ups ready to paint for \$49.95 w/T&KDs

Model Power



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# ELKINS RAILROAD MUSEUM B&O DIORAMAS

BY BRUCE ELLIOTT

## Introduction

The B&ORRHS and the B&O Museum collaborated with the West Virginia Railroad Museum for their 2018 display of the B&O. Several Society member/modelers constructed two HO scale dioramas as part of the B&ORRHS's "outreach," West Virginia style. This is the fourth railroad theme diorama effort that has been featured at the WVRM. The first featured the Virginian, the second the Western Maryland, the third Logging in the Mountain State and this year the B&O. Each year a different railroad that ran in West Virginia is represented, so there are several more to go.

## Choice of Location and Time Period

This year with a B&O theme, I was given the task of picking a location and building one of two dioramas. I wanted to do something in a 1:1 capacity. Let me elaborate. With few exceptions, model railroading requires selectively compressing real scenes. But think about it--the track, locomotives and rolling stock are built to scale, not selectively compressed. This time, I wanted to give as much fidelity to the scene as possible. The hardest part was picking a location in West Virginia that wouldn't require a lot of scratch-building and also that would be a location that still exists, keeping in mind that today of course CSX might be in charge. After much deliberation and milling through photos in books, I chose New Martinsville, which is located on the Ohio River immediately north of Brooklyn Jct. The only compromise I had to make was the station itself. Due to time and lack of plans, I was forced to use Life-Like's "snap-together" station that is at least based on B&O design (the kit box is labeled "Dickerson," and the model is "close" to the E. Francis Baldwin original). I reasoned that in 2018, there would be very few if any members of the public that would know of our deception; after all, it's been well over 30 years since the actual New Martinsville station was torn down. The only other compromise was the structure that sits across the street from the station. As built around the beginning of the last century, it was the railroad hotel. The structure still exists today but is no longer occupied and was a frame structure. Due to time and again lack of drawings I was forced to go with a Design Preservation Models kit representing a brick structure. I chose the DPM kit for its nice depiction of a brick commercial structure, its size and its general architectural appeal. I wanted to have steam locomotives on our trains. The timeframe is September 1955, as dictated by the spanking new 1956 Ford Thunderbird at the grade crossing. I had at our disposal a '57 Chevy, but by the time that auto model had appeared on the streets, steam would have been gone and I would have to have "Diseasles," better known as infernal combustion, and I just couldn't go there.

## Descriptive Details

When I announced to the museum group my choice of location, my partner in crime, B&ORRHS member Woody Higginbotham, was elated. His grandmother had a house that sat right behind the station, and he was very familiar with the location. He even pointed out his grandmother's house in several photographs. At this time I knew I had chosen the right location. The diorama is only about 2'x7'. This required omitting the street behind the station on the model. By the mid '50s, the railroad hotel had become a Rexall Drug Store and the Wetzel/Tyler Co Health Dept. The road at the grade crossing was West Virginia Rt. 7 at that time. The railroad had a twenty-car company siding across the tracks from the station. This was a team track for town businesses.

## Construction and Equipment

Woody and I built the diorama over a two-week stretch; the actual time was probably a steady week. I did the track work and the ballasting and built the asphalt and brick road. Woody's forte is scenery, which he did splendidly. Due to my having a broken wrist at the time, we had another museum member, Bill Van der Meer, paint the station. The house is one of his structures that fit the bill for architectural fidelity and time. Bill also painted the Health Dept./Drug store and provided the line poles. Locomotives were complements of B&ORRHS member Jim Schoonover, freight rolling stock is from Woody and me, and the passenger equipment is mine.

## Reception

When the diorama was delivered on the 18th of April for the museum's seasonal opening the following weekend, the staff was impressed with what they saw. The icing on the cake for me was when Woody told me that he brought his sister to see the diorama, and she was so impressed with it that it almost brought her to tears. To her, it was a trip back in time to when

she was a child. The fact that the station and the Health Dept./Drug Store weren't accurate never even crossed her mind. Everything in the scene was right to her, which was very satisfying to me.

While the station is gone now and the foliage has grown up quite a bit, the diorama becomes a time machine that takes us back in time to the days of steam with the appearance of freight train is No. 92, a Clarksburg - Benwood local and passenger train No. 73, a daily Wheeling - Kenova run.

### Coal Mine Diorama

The second diorama was constructed by B&ORRHS member Jim Schoonover. It is a composite of a typical coal mine that was everywhere in West Virginia on the B&O. Mines of this size lined the Monongahela River between Fairmont and Clarksburg. Bill Van der Meer weathered the coal cars.

### Visiting

The West Virginia Railroad Museum is located in the Darden Mill, 2 Railroad Ave., Elkins, WV. The museum is open Thursday - Sunday 9:30a - 5:30p. The B&O dioramas will be on display only through October, 2018.



This is the east end of the museum.



This house sits just north of the station on Franklin St. The west end of the street is paved, the east side is still a dirt road and is Linden Avenue. The lady of the house has gone out to feed the dog, and the little boy has tagged along.



At the turn of the last century this was the railroad hotel. Today the near end is now the Wetzel Co./ Tyler Co. Health Dept. and the far end is the Thomas Drug Store, a Rexall Drug Store. The road out front is West Virginia Rt. 7 or North St. (in town). The postman is out making his daily rounds. Train 92 from Clarksburg is switching the team track. Today the chores are being performed by E-24a #2267.



It's train time at New Martinsville as train #73 from Wheeling makes its stop.





Train #73 is ready to depart for Kenova, W. Va.



Another view of Train #73, pulled by P-5a #5209



In this photo we get an overview of the immediate station area. Train #92 is picking up an empty car from the team track. Two men are unloading an M-26 boxcar of LCL for the Wetzel Supply Co.



Train #92, with E-24a #2267 is working the team track at New Martinsville.



Old Jim Carpenter has decided to step off the porch to watch the train, but this hasn't as yet disturbed the cat that is still lying on the porch.



GP-7 #722 is on a trial run today and in time will be replacing the Q-3 that has held down this job for years.





It's a lot easier to switch out a leading industry with a pair of diesels. With the cars spotted at the mine the 722 will back the caboose out on the main, pull back into the mine while the head end with the loads back down and pick up the caboose, then back down and the 722 couples to the head end.



Here we have the back side of the colliery. The empties have been placed for the night crew to load.



On the mining diorama, a Haywood Turn has picked up cars from the Dutchman Coal Company's Linda Mine and is setting out the empties. It's easy to tell that I-12 #2413 just came back from the Keyser Shops with a fresh coat of paint.



# THE TATUM LADDER HANGERS

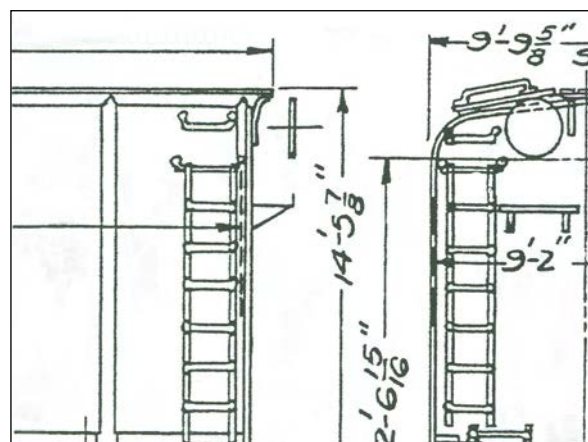
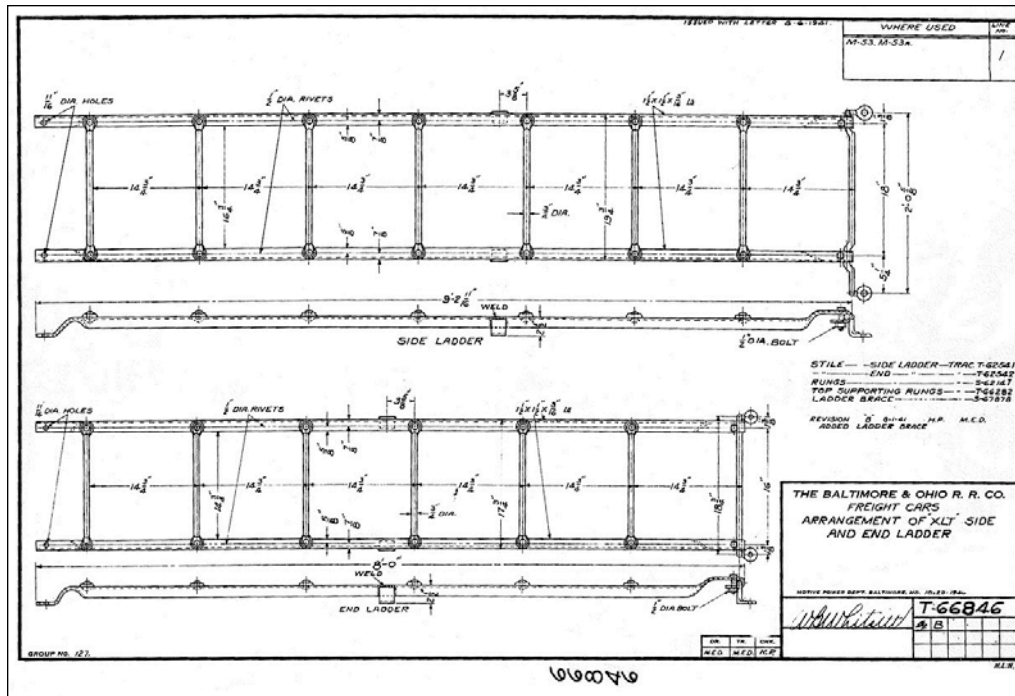
## BY EDWIN C. KIRSTATTER

Mr. J. J. Tatum invented a different way to place ladders on the sides of B&O boxcars and patented it, No. 1,820,848, April 25, 1931. These were seen on the class M-15bb, M-50, M-53 wagon-top boxcars and the N-34 wagon-top covered hoppers. The mechanical department's diagram drawings indicate this.

In this method, the ladders hung by their stiles from a specially shaped handhold at the top of the car side, and this became the top rung of the ladder. Only the bottoms of the stiles were riveted to the car sides.

It would be very hard to model this in small scales as you need to replace that top rung of the ladder with a special shaped grabiron attached to the car side. Where your ladders are stamped from metal, remove the top rung then bend the stiles to make a hook at top to go over the new grabiron you will now need to add.

Having cited the challenge of executing this feature, the ExactRail and Fox Valley HO models of the class M-53 wagon-top boxcars and the Spring Mills Depot N-34 replicate this detail very well. How blessed we are to have such fine models available ready to run!



Part of diagram for M-53A T-62884 showing ladders.

Aug. 25, 1931.

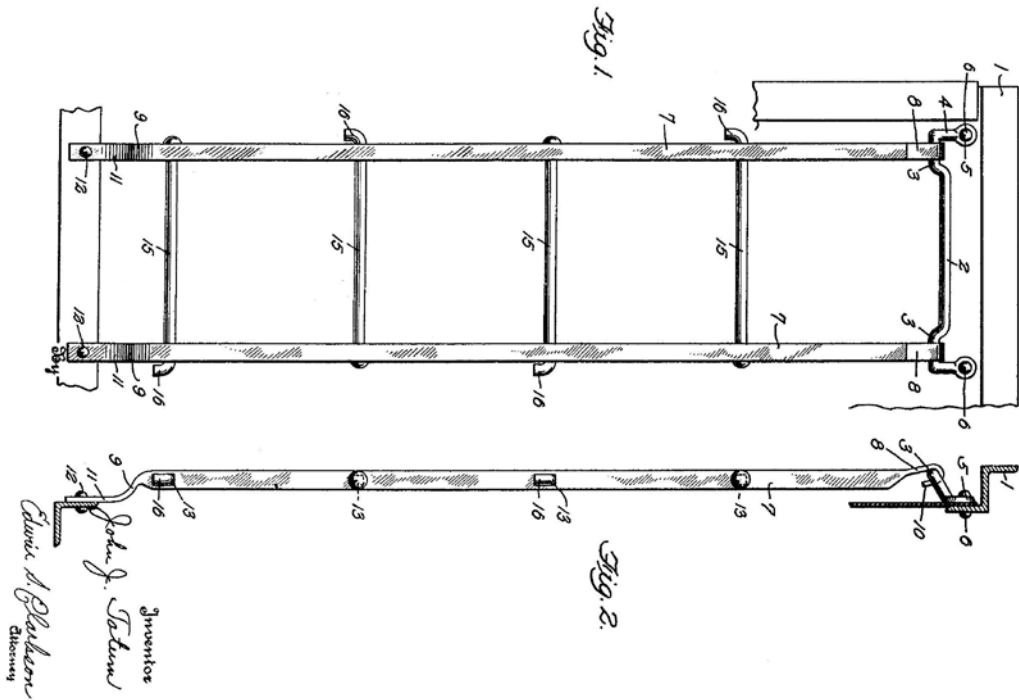
**J. J. TATUM**

**1,820,848**

CAR LADDER

Filed Sept. 24, 1929

2 Sheets-Sheet 1



**Aug. 25, 1931.**

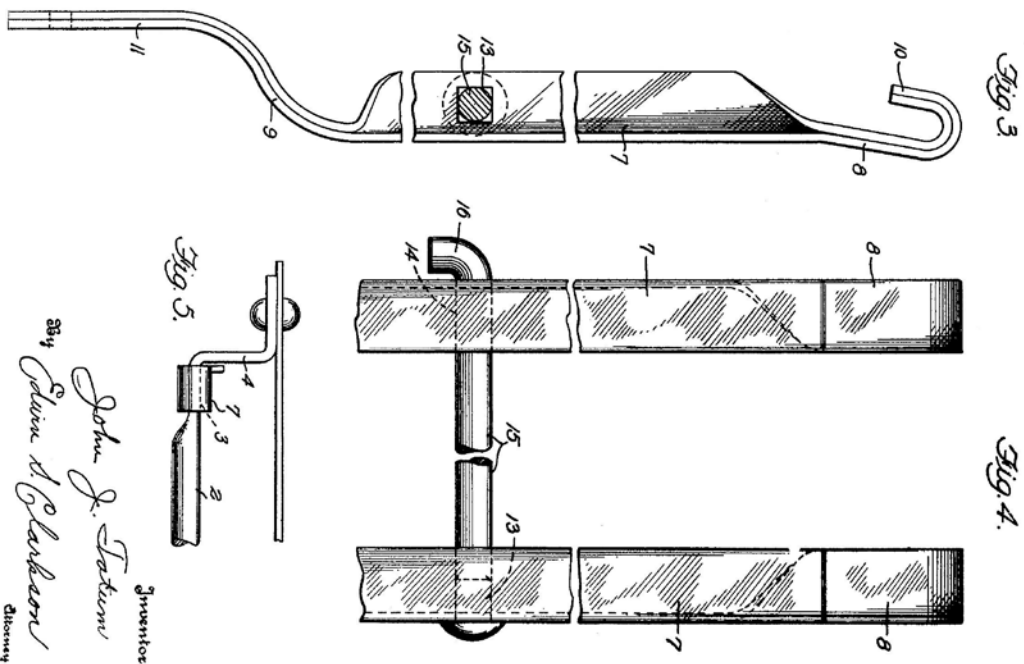
**J. J. TATUM**

**1,820,848**

### CAR LADDER

Filed Sept. 24, 1929

2 Shoots-Shoot 2



## UNITED STATES PATENT OFFICE

JOHN J. TATUM, OF BALTIMORE, MARYLAND

## CAR LADDER

Application filed September 24, 1929. Serial No. 394,853.

The object of my invention is to provide a collapsible car ladder that can be assembled without riveting the rungs to the stiles.

A further object of my invention is to provide a collapsible ladder, the top rung of which functions as a holding bracket for securing it to the car, the lower ends of the stiles being deflected for securing to the car; and with these and other objects in view my invention consists of the parts and combination of parts hereinafter set forth.

In the drawings:

Figure 1 is a front elevation of a ladder embodying my invention attached to a car.

Figure 2 is a side elevation of the same.

Figure 3 is a side elevation of a ladder stile embodying my invention.

Figure 4 is an enlarged detail view of the top portion of my ladder.

Figure 5 is an enlarged detail top plan view of the top bracket with one of the stiles attached thereto.

The reference numeral 1 designates a part of a car structure. The top rung 2 of the ladder is deflected at its ends from its longitudinal axis to form stile bearings 3 and is then bent (or otherwise suitably formed) rearwardly as at 4, and then upwardly as at 5, said portions being provided with a rivet or bolt opening and forming attaching eyes or members 6.

The ladder stiles 7 are identical in construction, therefore a description of one will suffice. The stile 7 is preferably made from 35 commercially formed angles, preferably L shape in cross section and these flanges are pressed, rolled, or otherwise superposed one on the other at the top and bottom end portions as indicated at 8 and 9, the top portion being turned to form hooks 10 designed to engage the hearings 3 on the top rung, the bottom portions being deflected rearwardly to form the securing brackets 11 which are secured to the car structure by the 45 rivets or bolts 12. The deflections 9 and the arms 4 of the top rung hold the ladder on the car spaced from the car the required distance between the side of the car and the ladder rung as prescribed by the United 50 States Federal safety appliance law.

Each stile is provided with square rung holes 13 and round rung holes 14 arranged in alternating arrangement, so that when the two stiles are arranged for assembly, a round hole 14 in one stile is directly opposite a square hole 13 in the other stile. The stiles are laced together with carriage bolts functioning as rungs 15, that is to say, headed bolts with one end rectangular, and the other end cylindrical, the rectangular end of the bolt fitting snugly in the rectangular rung hole 13 in one stile, while the cylindrical end of the bolts is seated in the cylindrical opening 14 of the opposite stile, the 55 rectangular end of the rung 15 locking the rung against rotation when being used by the trainman. To hold the rungs from becoming accidentally disengaged from the stiles I bend the end of the rung to form a lock or stop 16.

By removing the fastenings 11 at the lower ends of the stiles the ladder can be lifted from the combined top rung and holding bracket 2 and readily replaced in the same way should the ladder become damaged at any time.

My improved ladder is one that is easy to assemble, simple and cheap to manufacture, and because of its collapsible feature is less bulky to store and ship, and less difficult to assemble and place on the car than the conventional ladders in general use.

As shown in the enlarged detail view Figure 5 the combined bracket and top rung is flat at its outer ends over which the hooks 38 on the ladder stiles fit, while that portion between the ladder stiles is round.

What I claim is:

1. In combination, in a car ladder, a combined top rung and spacing and holding bracket, stiles slidably mounted on said rung, and means to hold the stiles in spaced relation on said rung.

2. In a collapsible car ladder, in combination, a top rung having offset end portions, hanging brackets extending from said end portions, stiles, hooks at the upper ends of the stiles slidably mounted on said rung and designed to engage said offset ends when in operative position, said stiles each hav-

2

1,820,848

ing alternate round and rectangular rung holes, headed rungs having a rectangular end and a round end designed to engage said rung holes, an extension on the round end of the rung positioned at an angle to the longitudinal axis of the rung, and a securing extension at the lower end of each stile.

3. In a car ladder, a combined upper ladder suspending rung and attaching bracket comprising a rod or bar having end portions bent to form attaching members for attachment to the side of a car to hold the bar spaced therefrom, and having recessed stile suspending offsets between said attaching end portions, and a ladder having its stiles provided at their upper ends with supporting members engaging said recesses.

4. In a car ladder, a combined upper ladder suspending rung and attaching bracket comprising a rod or bar having end portions bent to form attaching members for attachment to the side of a car to hold the bar spaced therefrom, and having recessed stile suspending offsets between said attaching end portions, and a ladder having its stiles provided at their upper ends with hooks detachably engaging said recesses and suspending the ladder therefrom.

In testimony whereof I affix my signature.

JOHN J. TATUM.



M-15bb T-62884 showing ladders



M-53 ladder, partial.



Fox Valley M-53

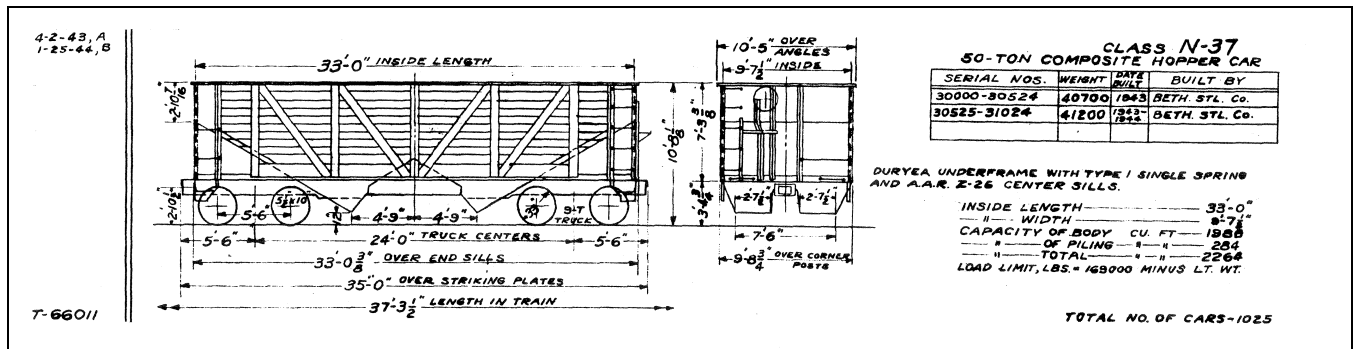


Spring Mills Depot N-34



# PROTO 2000 WAR EMERGENCY HOPPER GETS A FACELIFT

## BY WILLIAM HANLEY



N-37 Diagram

In 2001, Life-Like Proto 2000 (now Walthers) produced the War Emergency Hopper lettered for B&O. This was the N-37 class, and the model was produced in five numbers. With wire grabs, these cars were a far cry from the old Varney-Life-Like "USRA" hoppers. Life-Like then did the steel side rebuild N-37b version, then decided to give up on wire-grab hoppers. Like many of you, I bought all five.

In looking at prototype photos, I noticed that they had the original Kuhler Capital Dome herald. (photo 1). To remove the factory-applied herald, I soaked the area with Champ Decal Set and gently rubbed the herald with the tip of a wood toothpick. The old herald was then replaced with a 23" Capital dome from the Ed Sauers' hopper car decal set. To complete the enhancement project, I replaced the couplers with Kadee #58, added Kadee air hoses, and Detail Associates cut levers. Finally, I sprayed the car with Testors Dullcoat with a few drops of Floquil Concrete (photo 2).

Fast forward to about six months ago, when I revisited these cars. I decided the interiors of the cars now needed upgrading. At the same time, a friend of mine had just purchased a laser cutting machine and had started a business producing building kits. He was looking for projects. A light bulb moment occurred. I presented the idea of cutting 1/64" peel-and-stick inserts for the hopper. The rest is history, see photo 3. After applying the inserts, I gave them a wash with well-thinned India Ink.

Finally, I weathered the interiors with Bragdon pigments and sprayed Dullcoat to seal the powder. As the last step, I installed a coal load from JWD Premium Products ([www.jwdpremiumproducts.com](http://www.jwdpremiumproducts.com)).



Photo 1



Photo 2



Wood hopper inserts created by Rail Scale Models for the author.



Photo 3





N-37 30740 Location/date unknown, courtesy Bob's Photos.



N-37 30782 Location/date unknown, courtesy Mont Switzer

# B&O HO-SCALE FREIGHT CARS 1900-1970

BY GREG SMITH AND MEMBERS OF THE B&ORHS

[Greg Smith has been working on this compilation for a while; you can peck away at projects like these forever but there comes a point where you just have to “cut it loose.” Therefore, Greg wants to get this into circulation as a *working document*. Scott and I found and corrected some small errors, and we are aware of some omissions. So now it’s in the reader input mode, with the notion of publishing a future revised edition. By the way, scroll to the end of the spreadsheet for the keys to the various abbreviations and notes. JT]

| CAR TYPE | CLASS  | NUMBER SERIES | BUILDER        | FIRST BUILT | LENGTH (Strikers) | TRUCKS | PROTOTYPE NOTES | MODEL BUILDER | MEDIUM  | RTR KIT | MODEL NOTES |
|----------|--------|---------------|----------------|-------------|-------------------|--------|-----------------|---------------|---------|---------|-------------|
| Boxcar   | M-13   | 182000-183699 | ACF, SSC       | 1910        | 39' 2.75"         |        | 30, 48          | WEST          | Resin   | Kit     | A, B, E     |
| Boxcar   | M-13a  | 182000-183699 | ACF, SSC       | 1910        | 39' 2.75"         |        | 30, 48          | WEST          | Resin   | Kit     | A, B, E     |
| Boxcar   | M-13b  | 190000-190299 | ACF            | 1910        | 39' 2.75"         |        | 30, 48          | WEST          | Resin   | Kit     | A, B, E     |
| Boxcar   | M-13d  | 183700-183704 | BOS            | 1936        | 39' 2.75"         |        | 35, 47          |               |         |         | J           |
| Boxcar   | M-15   | 191000-192999 | BC&F           | 1910-11     | 43' 2.75"         |        | 30, 48          | OMI           | Brass   | RTR     | B           |
| Boxcar   | M-15b  | 184000-184934 | BOS, SSC, ACF  | 1916-17     | 43' 2.75"         |        | 30, 35, 48      | WEST          | Resin   | Kit     | A, B, E     |
| Boxcar   | M-15a  | 193000-195499 |                | 1910        | 43' 2.75"         |        | 30, 35, 48      | WEST          | Resin   | Kit     | A, B, E     |
| Boxcar   | M-15ba | 178995-178999 | BOS            | 1936        | 43' 2.75"         |        | 34, 47          | PSC           | Brass   | RTR     | B           |
| Boxcar   | M-15ba | 178995-178999 | BOS            | 1936        | 43' 2.75"         |        | 34, 47          | OMI           | Brass   | RTR     | B           |
| Boxcar   | M-15bc | 279999        | BOS            | 1935        | 42' 10.75"        |        | 35, 47          | PSC           | Brass   | RTR     | B           |
| Boxcar   | M-15c  | 173000-173948 | MVMC           | 1920-21     | 43' 2.75"         |        | 30, 35, 48      | WEST          | Resin   | Kit     | A, B, E     |
| Boxcar   | M-15d  | 174000-174499 | BCF            | 1922-23     | 43' 2.75"         |        | 30, 48          | WEST          | Resin   | Kit     | A, B, E     |
| Boxcar   | M-15d  | 175000-175999 | BCF            | 1922-23     | 43' 2.75"         |        | 30, 48          | WEST          | Resin   | Kit     | A, B, E     |
| Boxcar   | M-15e  | 174500-174999 | ACF            | 1922        | 43' 2.75"         |        | 30, 48          | WEST          | Resin   | Kit     | A, B, E     |
| Boxcar   | M-15h  | 81000-82999   | Rblt- BOS      |             | 43' 2.75"         |        | 30, 48          | WEST          | Resin   | Kit     | A, B, E     |
| Boxcar   | M-15j  | 83000-86499   | Rblt- BOS      |             | 43' 2.75"         |        | 30, 48          | WEST          | Resin   | Kit     | A, B, E     |
| Boxcar   | M-15K  | 370000-370989 | Rblt- BOS      | 1936-37     | 43' 2.75"         |        | 34, 47          | PSC           | Brass   | RTR     | F           |
| Boxcar   | M-15K  | 370000-370989 | Rblt- BOS      | 1936-37     | 43' 2.75"         |        | 34, 47          | PRO/F&C       | Resin   | Kit     | A, B, E     |
| Boxcar   | M-15L  | 379000-379049 | BOS            | 1937        | 43' 2.75"         |        | 34, 47          | F&C           | Resin   | Kit     | A, B, E     |
| Boxcar   | M-24   | 187000-187499 | H&B/ACF        | 1919        | 42' 1.5"          |        | 20, 30, 35      | TIC           | Plastic | Kit     | B, E        |
| Boxcar   | M-24   | 187000-187499 | H&B/ACF        | 1919        | 42' 1.5"          |        | 20, 30, 35      | WEST          | Resin   | Kit     | A, B, E     |
| Boxcar   | M-24b  | 287000-287039 | BOS            | 1937        | 42' 1.5"          |        | 20, 30, 35, 66  | TIC           | Plastic | Kit     | B, E        |
| Boxcar   | M-24b  | 287000-287039 | BOS            | 1937        | 42' 1.5"          |        | 20, 30, 35, 66  | SUN           | Resin   | Kit     | A, B, E     |
| Boxcar   | M-25e  | 169500-169749 | C.A.T./C&O     | 1937/1964   | 41' 11"           |        | 36, 65          | IMR           | Plastic | RTR     | K           |
| Boxcar   | M-26   | 265000-266999 | PS             | 1935        | 42' 6"            |        | 30, 34          | PSC           | Brass   | RTR     | F           |
| Boxcar   | M-26   | 265000-266999 | PS             | 1935        | 42' 6"            |        | 30, 34          | RED           | Plastic | RTR     |             |
| Boxcar   | M-26   | 265000-266999 | PS             | 1935        | 42' 6"            |        | 30, 34          | SUN           | Resin   | Kit     | B, E        |
| Boxcar   | M-26   | 265000-266999 | PS             | 1935        | 42' 6"            |        | 30, 34          | WKW           | Plastic | RTR     | B, C, E     |
| Boxcar   | M-26a  | 268000-271499 | SSC, BETH, ACF | 1926-27     | 42' 3"            |        | 30, 34          | RED           | Plastic | RTR     | K           |



| CAR TYPE | CLASS | NUMBER SERIES | BUILDER                  | FIRST BUILT | LENGTH (Strikers) | TRUCKS | PROTOTYPE NOTES        | MODEL BUILDER | MEDIUM        | RTR KIT | MODEL NOTES |
|----------|-------|---------------|--------------------------|-------------|-------------------|--------|------------------------|---------------|---------------|---------|-------------|
| Boxcar   | M-26b | 267000-267999 | BETH                     | 1926        | 42' 3"            |        | 30, 34                 | RED           | Plastic       | RTR     | K           |
| Boxcar   | M-26c | 271500-272499 | BALT                     | 1928        | 42' 3"            |        | 31, 34                 | RED           | Plastic       | RTR     | K           |
| Boxcar   | M-26d | 272500-277999 | BALT                     | 1928-30     | 43' 0.5"          |        | 31, 34                 | SPDW          | Plastic/Resin | Kit     | E           |
| Boxcar   | M-27  | 290000-290999 | SSC                      | 1926        | 42' 3"            |        | 30, 34                 | PSC           | Brass         | RTR     | F           |
| Boxcar   | M-27a | 291000-291999 | SSC, BETH                | 1926        | 42' 3"            |        | 30, 34                 | PSC           | Brass         | RTR     | F           |
| Boxcar   | M-27b | 295000-295500 | BOS                      | 1933-34     | 42' 3"            |        | 31, 34                 | PSC           | Brass         | RTR     | F           |
| Boxcar   | M-27c | 280000-280999 | BOS                      |             | 42' 3"            |        | 30, 34                 | PSC           | Brass         | RTR     | F           |
| Boxcar   | M-27c | 280000-280999 | BOS                      |             | 42' 3"            |        | 30, 34                 | SUN           | Resin         | Kit     | A, B, E     |
| Boxcar   | M-27d | 281000-281999 | BOS                      |             | 42' 3"            |        | 30, 34                 | PSC           | Brass         | RTR     | F           |
| Boxcar   | M-27f | 382000-382179 | BOS                      | 1939        | 42' 3"            |        | 31, 34                 | PSC           | Brass         | RTR     | F           |
| Boxcar   | M-27f | 382000-382179 | BOS                      | 1939        | 42' 3"            |        | 31, 34                 | SUN           | Resin         | Kit     | A, B, E     |
| Boxcar   | M-50  | 367100        | BOS                      | 1935        | 42' 9.625"        | BETT   | 47, All Coorig.        | PSC           | Brass         | RTR     | F           |
| Boxcar   | M-50  | 367100        | BOS                      | 1935        | 42' 9.625"        | BETT   | 47, All Coorig.        | F&C           | Resin         | Kit     | A, B, E     |
| Boxcar   | M-53  | 380000-381999 | BETH, BOS                | 1937        | 41' 1"            | BETT   | 34, 44, 47, 22/24      | PSC           | Brass         | RTR     | F           |
| Boxcar   | M-53  | 380000-381999 | BETH, BOS                | 1937        | 41' 1"            | BETT   | 34, 44, 47, 22/24      | FOX           | Plastic       | RTR     | K           |
| Boxcar   | M-53  | 380000-381999 | BETH, BOS                | 1937        | 41' 1"            | BETT   | 34, 44, 47, 22/24      | EXT           | Plastic       | RTR     | K           |
| Boxcar   | M-53  | 380000-381999 | BETH, BOS                | 1937        | 41' 1"            | BETT   | 34, 44, 47, 22/24      | SUN           | Resin         | Kit     | A, B, E     |
| Boxcar   | M-53  | 380000-381999 | BETH, BOS                | 1937        | 41' 1"            | BETT   | 34, 44, 47, 22/24      | WRTK          | Resin         | Kit     | A, B, E     |
| Boxcar   | M-53a | 385000-385999 | BETH, BOS                | 1941        | 41' 1"            | BETT   | 34, 44, 47, 22/24      | SUN           | Resin         | Kit     | A, B, E     |
| Boxcar   | M-55c | 466000-466499 | GAT                      | 1945        | 41' 1"            | BETT   | 35, 46                 | SUN           | Resin         | Kit     | A, B, E     |
| Boxcar   | M-55H | 467000-467999 | PRES                     | 1947        | 41' 1"            | BETT   | 35, 46                 | SUN           | Resin         | Kit     | A, B, E     |
| Boxcar   | M-59  | 298000-298899 | BETH, PRES               | 1946-47     | 41' 1"            | BETT   | 35, 22, 18, 44         | C&BT          | Plastic       | Kit     | B, E        |
| Boxcar   | M-61  | 282000-283149 | ACF                      | 1951        | 52' 10.75"        | BETT   | 35, 22, 15, 44         | BRA           | Plastic       | Kit     | B, E        |
| Boxcar   | M-75  | 475035-475074 | PS                       | 1963        | 57' 8.25"         |        | 35, 22, 16, 29a, 50    | ATL           | Plastic       | RTR     | B           |
|          |       |               |                          |             |                   |        |                        |               |               |         |             |
| Hopper   | N-12  | 220000-220499 | SSC                      | 1913        | 31' 7.25"         |        | 2, 30, 51, 56, 30/31   | F&C           | Resin         | Kit     | A, B, C, E  |
| Hopper   | N-12a | 221000-221499 | PRES                     | 1913        | 31' 7.25"         |        | 2, 30, 51, 56, 30/31   |               |               |         | J           |
| Hopper   | N-12b | 220500-220999 | ACF                      | 1913        | 31' 7.25"         |        | 2, 30, 51, 56, 30/31   |               |               |         | J           |
| Hopper   | N-12c | 221500-221999 | CAM                      | 1913        | 31' 7.25"         |        | 2, 30, 51, 56, 30/31   |               |               |         | J           |
| Hopper   | N-12d | 223000-225409 | ACF, RAL, SSC, PRES, GRN | 1915-16     | 31' 7.25"         |        | 2, 30, 51, 56, 30/31   |               |               |         | J           |
| Hopper   | N-12e | 322000-323414 | PRESS                    | 1921        | 31' 5"            |        | 2, 30, 51, 56, 30/31   |               |               |         | J           |
| Hopper   | N-12f | 326000-326999 | BCF, CAM                 | 1922        | 31' 5"            |        | 2, 30, 51, 56, 30/31   |               |               |         | J           |
| Hopper   | N-12g | 327000-420499 | ACF, PRES, SSC, RAL      | 1923-24     | 31' 5"            |        | 2, 30, 51, 56, 30/31   |               |               |         | J           |
| Hopper   | N-12h | 420500-424879 | BOS                      | 1925        | 31' 7"            |        | 2, 30, 51, 56, 30/31   |               |               |         | J           |
| Hopper   | N-12j | 225500-225799 | SSC                      | 1923        | 31' 5"            |        | ex-Hillman Coal & Coke |               |               |         | J           |
| Hopper   | N-12k | 425000-425999 | BCF                      | 1925        | 31' 5"            |        | ex-Hillman Coal & Coke |               |               |         | J           |

| CAR TYPE       | CLASS | NUMBER SERIES | BUILDER                  | FIRST BUILT | LENGTH (Strikers) | TRUCKS | PROTOTYPE NOTES            | MODEL BUILDER | MEDIUM  | RTR KIT | MODEL NOTES |
|----------------|-------|---------------|--------------------------|-------------|-------------------|--------|----------------------------|---------------|---------|---------|-------------|
| Hopper         | N-14  | 233000-233497 | SSC                      | 1904 (1917) |                   |        | ex-Jamison Coke & Coal Co. | WEST          | Resin   | Kit     | A, B, E     |
| Hopper         | N-15  | 233500-233799 | SSC                      | 1904 (1917) |                   |        | ex-Jamison Coke & Coal Co. | WEST          | Resin   | Kit     | A, B, E     |
| Hopper         | N-17  | 320000-324999 | RAL, ACF, PRES, SSC      | 1919        | 31' 11"           |        | 2, 31, 52, 56, 30/31       | ACCU          | Plastic | Kit     | C           |
| Hopper         | N-17  | 320000-324999 | RAL, ACF, PRES, SSC      | 1919        | 31' 11"           |        | 2, 31, 52, 56, 30/31       | WKW           | Plastic | RTR     | C           |
| Hopper         | N-17  | 320000-324999 | RAL, ACF, PRES, SSC      | 1919        | 31' 11"           |        | 2, 31, 52, 56, 30/31       | MTH           | Plastic | RTR     | C           |
| Hopper         | N-17a | 426000-426299 | PRES                     | 1923        | 31' 11"           |        | ex-Bertha Consumer         |               |         |         |             |
| Hopper         | N-35  | 427000-428999 | BETH/GAT                 | 1940-41     | 35'               | BETT   | 2, 31, 44, 52, 55          | ATH/BO        | Plastic | Kit     | H           |
| Hopper         | N-35  | 427000-428999 | BETH/GAT                 | 1940-41     | 35'               | BETT   | 2, 31, 44, 52, 55          | ATL           | Plastic | RTR     | M           |
| Hopper         | N-35a | 429000-429999 | BETH, PRES, RAL, PS, ACF | 1945-47     | 35'               | BETT   | 2, 31, 44, 52, 55          |               |         |         | J           |
| Hopper         | N-35a | 534000-534999 | BETH, PRES, RAL, PS, ACF | 1945-47     | 35'               | BETT   | 2, 31, 44, 52, 55          |               |         |         |             |
| Hopper         | N-35a | 636000-640999 | BETH, PRES, RAL, PS, ACF | 1945-47     | 35'               | BETT   | 2, 31, 44, 52, 55          |               |         |         |             |
| Hopper         | N-35a | 820000-823999 | BETH, PRES, RAL, PS, ACF | 1945-47     | 35'               | BETT   | 2, 31, 44, 52, 55          |               |         |         |             |
| Hopper         | N-35b | 824000-824999 | BETH                     | 1947-48     | 35'               | BETT   | 2, 31, 44, 52, 55          |               |         |         | J           |
| Hopper         | N-35c | 732000-732499 | BETH                     | 1940        | 35'               | BETT   | 2, 31, 44, 52, 55          |               |         |         | J           |
| Hopper         | N-37  | 30000-31024   | BETH                     | 1943-44     | 35'               | BETT   | 2, 31, 37, 44, 52, 56      | LL/P2K        | Plastic | RTR     | K           |
| Hopper         | N-37b | 733000-733199 | BOS                      | 1950's      | 35'               | ASF7   | 2, 31, 37, 44, 52, 56      | LL/P2K        | Plastic | RTR     | K           |
| Hopper         | N-41  | 825000-828999 | ACF, GAT, BETH           | 1951-52     | 34'               | BETT   | 2, 31, 37, 44, 52, 56      | ATH           | Plastic | RTR     | H, K        |
| Hopper         | N-41a | 829300-829783 | ACF                      | 1951        | 34'               | BETT   | 2, 31, 37, 44, 52, 56      |               |         |         | J           |
| Hopper         | N-44  | 727000-730299 | BOS                      | 1956-60     | 34'               | BETT   | 2, 31, 44, 52, 55          | ATH           | Plastic | Kit/RTR | H           |
| Hopper         | N-44  | 727000-730299 | BOS                      | 1956-60     | 34'               | BETT   | 2, 31, 44, 52, 55          | ATL           | Plastic | RTR     | G           |
| Hopper         | H-9   | 52000-52999   | C&O                      | 1942 (1962) | 33' 11.75"        | BETT   |                            | IMR           | Plastic | RTR     |             |
|                |       |               |                          |             |                   |        |                            |               |         |         |             |
| Covered Hopper | N-34  | 630300-630499 | BOS                      | 1940        | 33' 11.25"        | BETT   | 5, 10, 31, 47, 53          | OMI           | Brass   | RTR     | F           |
| Covered Hopper | N-34  | 630300-630499 | BOS                      | 1940        | 33' 11.25"        | BETT   | 5, 10, 31, 47, 53          | F&C           | Resin   | Kit     | A, B, E     |
| Covered Hopper | N-34  | 630300-630499 | BOS                      | 1940        | 33' 11.25"        | BETT   | 5, 10, 31, 47, 53          | SMD           | Plastic | RTR     | K           |
| Covered Hopper | N-36  | 630500-630649 | GRN                      | 1941        | 33' 11.25"        | BETT   | 5, 31, 44, 53, 56          | E&B           | Plastic | Kit     | A, B, E, L  |
| Covered Hopper | N-36a | 630650-630999 | ACF                      | 1946        | 33' 11.25"        | ASF7   | 5, 31, 44, 53, 56          | E&B           | Plastic | Kit     | A, B, E, L  |
| Covered Hopper | N-42  | 629500-629999 | GRN                      | 1953-54     | 34' 1"            | ASF7   | 5, 31, 53, 56              |               |         |         |             |
| Covered Hopper | N-43  | 631100-631679 | PS                       | 1955-57     | 35' 3"            | ASF7   | 5, 31, 53, 56              | KAD/BO        | Plastic | RTR     | K           |
| Covered Hopper | N-43  | 631100-631679 | PS                       | 1955-57     | 35' 3"            | ASF7   | 5, 31, 53, 56              | ATL           | Plastic | RTR     | C           |
| Covered Hopper | N-43  | 631100-631679 | PS                       | 1955-57     | 35' 3"            | ASF7   | 5, 31, 53, 56              |               |         |         |             |
| Covered Hopper | N-45  | 830000-830004 | GAT                      | 1956        | 39' 6"            | ASF7   | 5, 10a, 53, 56             | WKW           | Plastic | RTR     | C           |
| Covered Hopper | N-46  | 628000-628044 | PS                       | 1957        | 47' 0.75"         | BETT   | 6, 31, 10b, 53, 56         | RR            | Plastic | Kit     | A, C        |
| Covered Hopper | N-46  | 628000-628044 | PS                       | 1957        | 47' 0.75"         | BETT   | 6, 31, 10b, 53, 56         | ATH           | Plastic | RTR     | C           |
| Covered Hopper | N-47  | 830005-830049 | GAT                      | 1960        | 39' 6"            | BETT   | 2, 31, 10a, 53, 56         |               | Plastic |         |             |
| Covered Hopper | N-47a | 830050-830184 | GAT                      | 1963-64     | 39' 6"            | ASF7   | 2, 31, 10a, 53, 56         | ATHG          | Plastic | RTR     |             |

| CAR TYPE       | CLASS  | NUMBER SERIES | BUILDER                 | FIRST BUILT | LENGTH (Strikers) | TRUCKS          | PROTOTYPE NOTES          | MODEL BUILDER | MEDIUM  | RTR KIT | MODEL NOTES      |
|----------------|--------|---------------|-------------------------|-------------|-------------------|-----------------|--------------------------|---------------|---------|---------|------------------|
| Covered Hopper | N-80   | 832000-832029 | GAT                     | 1964        | 50' 9"            | ASF10           | 7, 31, 10c, 54, 56       | WKW           | Plastic | RTR     | C                |
| Covered Hopper | N-90   | 835000-835154 | ACF                     | 1963        | 51' 3"            | ASF10           | 9, 10d, 31, 54, 55       | ACCU          | Plastic | Kit     | C                |
| Covered Hopper | N-91   | 836000-836199 | ACF                     | 1964        | 51' 3.75"         | BAR S2A         | 6, 7, 31, 54, 56         | ACCU          |         | Kit     | C                |
| Covered Hopper | N-92   | 837000-837024 | ACF                     | 1964        | 54' 7.75"         | ASF10           | 6, 12, 31, 54, 56        | ?             |         |         |                  |
| Covered Hopper | N-93   | 837500-837529 | UTC                     | 1964        | 47' 2.75"         | BAR S2A         |                          |               |         |         |                  |
| Covered Hopper | N-94   | 600100-600199 | PS                      | 1965        | 35' 3"            | BAR S2A         |                          | ATH           | Plastic | RTR     |                  |
| Covered Hopper | HC-24  | 600200-602299 | ACF                     | 1965        | 52' 0.5"          | BAR S2A         |                          | ACCU          | Plastic | Kit     |                  |
| Covered Hopper | HC-24  | 600200-602299 | ACF                     | 1965        | 52' 0.5"          | BAR S2A         |                          | ATL           | Plastic | RTR     |                  |
| Covered Hopper | HC-27  | 603000-603199 | PS                      | 1969        | 56' 7"            | BAR S2A         |                          | ACCU          | Plastic | Kit     | B, H             |
|                |        |               |                         |             |                   |                 |                          |               |         |         |                  |
| Gondola        | O-16   | 146050-147499 | SSC                     | 1905-06     | 42' 9"            | ARC-Andr        | 30, 49, 51               | F&C           | Resin   | Kit     | A, B, E          |
| Gondola        | O-27   | 250000-250499 | SSC                     | 1919        | 48' 7"            | BETT            | 30, 53, 56, 57           | WEST          | Resin   | Kit     | A, B, E          |
| Gondola        | O-27a  | 250500-256499 | CAM, BETH, GAT, SSC     | 1922-25     | 48' 7"            | BETT            | 30, 53, 56, 57           | WEST          | Resin   | Kit     | A, B, E          |
| Gondola        | O-27ba | 256700-256741 | ACF, BETH               | 1929-30     | 52' 5.5"          | BETT            | 30, 53, 56, 57           | WEST          | Resin   | Kit     | A, B, E          |
| Gondola        | O-27ba | 256750-256799 | ACF, BETH 2 more groups | 1929-30     | 52' 5.5"          | BETT            | 30, 53, 56, 57           | WEST          | Resin   | Kit     | A, B, E          |
| Gondola        | O-59a  | 260500-260749 | ACF                     | 1940-41     | 55' 6.75"         | BETT            | 31, 44, 53, 56, 57       | TAN           | Plastic | RTR     | K                |
| Gondola        | O-59a  | 262000-263299 | ACF, BETH               | 1941        | 55' 6.75"         | BETT            | 31, 44, 53, 56, 57       | SUN           | Resin   | Kit     | A, B, E          |
| Gondola        | O-60   | 450200-450749 | BETH                    | 1937        | 65' 6.75"         | BETT            | 31, 44, 53, 56, 57       | PSC           | Brass   | RTR     | F                |
| Gondola        | O-60   | 450200-450749 | BETH                    | 1937        | 65' 6.75"         | BETT            | 31, 44, 53, 56, 57       | E&B           | Plastic | Kit     | C, H, I          |
| Gondola        | O-63   | 264000-264999 | BETH                    | 1951        | 54' 1.5"          | BETT            | 31, 53, 55, 56           | SUN           | Resin   | Kit     | A, B, E          |
| Gondola        | O-65d  | 355450-355459 | BETH                    | 1957        | 54' 4.5"          | BETT            | 31, 53, 56, Covered      | ATH/BEV       | Plastic | Kit     | C, H             |
|                |        |               |                         |             |                   |                 |                          |               |         |         |                  |
| Flat           | P-11   | 106000-106699 | ACF                     | 1902        | 40' 0"            | ARC, ANDR, BETT | 30, 38, 49, 52           | F&C           | Resin   | Kit     | A, B, E          |
| Flat           | P-11   | 106000-106699 | ACF                     | 1902        | 40' 0"            | ARC, ANDR, BETT |                          | SUN           | Resin   | Kit     | A, B, E          |
| Flat           | P-25   | 8100-8249     | GRN                     | 1951        | 54' 2.75"         | BETT            | 31, 40, 49, 52           | PROTO         | Resin   | Kit     | A, B, E          |
| Flat           | P-30   | 9935          | BOS                     | 1953        | 58' 4"            | 6 WHL           | 124-ton depressed center | E&P           | Brass   | RTR     | B                |
| Flat           | P-31   | 8400-8499     | BOS, GRN                | 1953-54     | 54' 2.75"         | BETT            | 31, 40, 49, 53           | IMR           | Plastic | RTR     | K                |
| Flat           | P-31   | 8900-8979     | BOS, GRN                | 1955        | 54' 2.75"         | BETT            | 31, 40, 49, 53           | IMR           | Plastic | RTR     | K                |
| Flat           | P-31c  | 9620-9699     | BOS, GRN                | 1953-54     | 54' 2.75"         | BETT            | 31, 40, 49, 53, 58       | IMR           | Plastic | RTR     | K                |
| Flat           | P-31c  | 9700-9747     | BOS, GRN                | 1953-54     | 54' 2.75"         | BETT            | 31, 40, 49, 53, 58       | IMR           | Plastic | RTR     | K                |
| Bi-Level       | BTTX   | 550492-550597 | PS                      | 1962        | 89' 9"            | TIM             | Open Bi-Level            | Accu          | Plastic | Kit     | C, H             |
| Tri-Level      | ETTX   | 501782-501903 | PS                      | 1962        | 89' 9"            | TIM             | Open Tri-Level           |               |         |         |                  |
| Bi-Level       | KTTX   | 550655-550679 | ACF                     | 1963        | 89' 9"            | TIM             |                          |               |         |         |                  |
|                |        |               |                         |             |                   |                 |                          |               |         |         |                  |
| Reefer         | R      |               |                         |             |                   |                 | Ice Service              | WEST          | Resin   | Kit     | PRR R-7: A, B, E |
| Reefer         | R      |               |                         |             |                   |                 |                          | PSC           | Brass   | RTR     | B                |
| Stock          | S-1    | 113100-113407 | BOS                     | 1962        | 52' 6"            | BETT            | 31, 52                   | TRN           | Brass   | RTR     | B                |

| CAR TYPE | CLASS  | NUMBER SERIES | BUILDER            | FIRST BUILT | LENGTH (Strikers) | TRUCKS     | PROTOTYPE NOTES       | MODEL BUILDER | MEDIUM  | RTR KIT | MODEL NOTES |
|----------|--------|---------------|--------------------|-------------|-------------------|------------|-----------------------|---------------|---------|---------|-------------|
| Stock    | S-1    | 113100-113407 | BOS                | 1962        | 52' 6"            | BETT       | 31, 52                | OMI           | Brass   | RTR     | B           |
| Stock    | S-2    | 114000-114066 | BOS                | 1962        | 52' 6"            | BETT       | 31, 52                | OMI           | Brass   | RTR     | B           |
| Stock    | Deluxe | 113000-113085 | North American Car | 1961-62     |                   | BETT       | Leased for 2 years.   | OMI           | Brass   | RTR     | B           |
| Stock    | Mather | 110000-110700 | Mather             | 1928-29     | 37' 7"            | BETT       | Double Deck           | SUN           | Resin   | Kit     | A, B, C     |
| Stock    | Mather | 111000-111099 | Mather             | 1926        | 37' 7"            | BETT       | Double Deck           | SUN           | Resin   | Kit     | A, B, C     |
| Stock    | Mather | 110000-110700 | Mather             | 1928-29     | 37' 7"            | BETT       | Double Deck           | LL/P2K, WKW   | Plastic | Kit/RTR | E, G        |
| Stock    | Mather | 111000-111099 | Mather             | 1926        | 37' 7"            | BETT       | Double Deck           | LL/P2K, WKW   | Plastic | Kit/RTR | E, G        |
| Stock    | Mather | 112000-112599 | Mather             | 1927-36     | 37' 7"            | BETT       | Single Deck           | SUN           | Resin   | Kit     | A, B, C     |
| Stock    | Mather | 112000-112599 | Mather             | 1927-36     | 37' 7"            | BETT       | Single Deck           | LL/P2K, WKW   | Plastic | Kit/RTR | E, G        |
|          |        |               |                    |             |                   |            |                       |               |         |         |             |
| Hopper   | W-1    | 132000-135999 | PRESS, CAM, SSC    | 1910-11     | 42' 5"            | ANDR, BETT | 4, 30, 52, 56, 59, 60 | WEST          | Resin   | Kit     | A, B, E     |
| Hopper   | W-1    | 132000-135999 | PRESS, CAM, SSC    | 1910-11     | 42' 5"            | ANDR, BETT | 4, 30, 52, 56, 59, 60 | Bow           | Plastic | Kit     | C           |
| Hopper   | W-2    | 432000-433999 | BETH, BCF          | 1926        | 42' 3"            | ANDR, BETT | 4, 30, 53, 55         | ATH           | Plastic | Kit/RTR | C, H        |
| Hopper   | W-2a   | 434000-434999 | BCF                | 1926-27     | 42' 3"            | ANDR, BETT | 4, 30, 53, 55         | BLI           | Plastic | RTR     | C           |
| Hopper   | W-2a   | 532000-533999 | BCF, BETH          | 1927        | 42' 3"            | ANDR, BETT | 4, 30, 53, 55         | BLI           | Plastic | RTR     | C           |
| Hopper   | W-2b   | 430000-431999 | SSC, BETH          | 1929        | 43' 1.375"        | ANDR, BETT | 4, 31, 44, 53, 55     |               |         |         |             |
| Hopper   | W-7    | 435000-435499 | PRES, PS           | 1947        | 42' 8"            | BETT       | 3, 31, 44, 53, 55     | STW/BOW       | Plastic | Kit     | H           |
| Hopper   | W-7    | 435000-435999 | PRES, PS           | 1947        | 42' 8"            | BETT       | 3, 31, 44, 53, 55     | ACCU          | Plastic | Kit     | H           |
| Hopper   | W-7a   | 621000-622499 | PS                 | 1948        | 42' 8"            | BETT       | 3, 31, 44, 53, 55     | STW/BOW       | Plastic | Kit     | H           |
| Hopper   | W-8    | 625000-626499 | BETH, PS           | 1956        | 41' 8"            | BETT       | 3, 31, 44, 53, 55     | STW/BOW       | Plastic | Kit     | H           |
| Hopper   | W-9    | 734000-735999 | BET                | 1957-58     | 41' 8"            | BETT       | 3, 31, 44, 53, 55     | STW/BOW       | Plastic | Kit     | H           |
| Hopper   | W-10   | 527000-529999 | BOS                | 1964        | 41' 8"            | BETT       | 3, 31, 44, 53, 55     | STW/BOW       | Plastic | Kit     | H           |

| Note | MODEL INFORMATION   |
|------|---|
| A    | Kit: No trucks or couplers.   |
| B    | Unpainted and needs decals.   |
| C    | Modification needed follow photographs.                               |
| D    | Crude and out of date needs a lot of work.                            |
| E    | Craftsman kit with many fine detail parts. Read directions carefully! |
| F    | Painted and unpainted versions. Unpainted needs decals.               |
| G    | RTR & kit version.  |
| H    | Simple tools and glue needed.   |
| I    | Needs weight.   |
| J    | Conversions from other models of this class.                          |
| K    | Acceptable for the most part as is.                                   |
| L    | Fill in sides.  |
| M    | Body too long   |



| PROTOTYPE NOTES                    |                                    |  |      |                                  |  |
|------------------------------------|------------------------------------|--|------|----------------------------------|--|
| Note                               | Comment                            |  | Note | Comment                          |  |
| <b>Hopper Bays</b>                 |                                    |  |      |                                  |  |
| 1                                  | Single-bay airslide covered hopper |  | 2    | Two-bay open hopper              |  |
| 3                                  | Three-bay open hopper              |  | 4    | Four-bay open hopper             |  |
| 5                                  | Two-bay covered hopper             |  | 6    | Three-bay covered hopper         |  |
| 7                                  | Four-bay covered hopper            |  | 8    | Five-bay covered hopper          |  |
| 9                                  | Six-bay covered hopper             |  |      |                                  |  |
| <b>Hopper Hatches</b>              |                                    |  |      |                                  |  |
| 10                                 | Eight square hatches               |  | 10a  | Six round hatches                |  |
| 10b                                | Ten round hatches                  |  | 10c  | Twelve round hatches             |  |
| 10d                                | Five round hatches                 |  | 11   | Eight round hatches              |  |
| 12                                 | Four oval hatches                  |  |      |                                  |  |
| <b>Boxcar Door Openings</b>        |                                    |  |      |                                  |  |
| 13                                 | Six-foot opening                   |  | 14   | Seven-foot opening               |  |
| 15                                 | Eight-foot opening                 |  | 16   | Ten-foot opening                 |  |
| 17                                 | Twelve-foot opening                |  | 18   | Fourteen-foot opening            |  |
| <b>Running Boards</b>              |                                    |  |      |                                  |  |
| 19                                 | Wood running board                 |  | 19a  | Safety tread metal running board |  |
| 19b                                | Open grate running board           |  | 46   | No running board                 |  |
| <b>Boxcar Doors</b>                |                                    |  |      |                                  |  |
| 20                                 | Wood Camel door                    |  | 21   | Tatum door                       |  |
| 22                                 | Steel Youngstown/Camel door        |  | 23   | Superior door                    |  |
| 24                                 | Flat door                          |  | 25   | Creco door                       |  |
| 26                                 | Wood side door                     |  | 27   | Single door                      |  |
| 28                                 | 1 and 3/4 door                     |  | 29   | Double door                      |  |
| 29a                                | Plug door                          |  |      |                                  |  |
| <b>Hand Brake</b>                  |                                    |  |      |                                  |  |
| 30                                 | Stem winder hand brake             |  | 31   | Power hand brake                 |  |
| 31a                                | Ratchet hand brake                 |  |      |                                  |  |
| <b>Open Hopper Latches</b>         |                                    |  |      |                                  |  |
| 32                                 | Wine type latches                  |  | 33   | Enterprise type latches          |  |
| <b>Boxcar Ends</b>                 |                                    |  |      |                                  |  |
| 34                                 | Flat ends                          |  | 35   | Dreadnaught 5/5/5 ends           |  |
| 35a                                | Dreadnaught 4/5 ends               |  | 35b  | Dreadnaught 5/5 ends             |  |
| 35c                                | Dreadnaught 5/6 ends               |  | 36   | Deco ends                        |  |
| 37                                 | Wood/composite ends                |  |      |                                  |  |
| <b>Flat Car Stake Pockets</b>      |                                    |  |      |                                  |  |
| 38                                 | Twelve stake pockets               |  | 39   | Thirteen stake pockets           |  |
| 40                                 | Fourteen stake pockets             |  | 40a  | Fifteen stakes pockets           |  |
| <b>Special Cars &amp; Features</b> |                                    |  |      |                                  |  |
| 41                                 | Can stock car                      |  | 44   | Duyrea underframe                |  |
| 43                                 | Bi-level auto rack car             |  | 48   | USRA design                      |  |
| 47                                 | Wagontop design                    |  | 50   | Insulated car                    |  |
| 49                                 | Steel frame with all wood body     |  | 66   | Used in cement service           |  |
| 58                                 | Bulkheads                          |  |      |                                  |  |
| <b>Car Capacity</b>                |                                    |  |      |                                  |  |
| 51                                 | 40-ton capacity                    |  | 52   | 50/55-ton capacity               |  |
|                                    |                                    |  |      |                                  |  |
| 53                                 | 70-ton capacity                    |  | 54   | 100-ton capacity                 |  |

| PROTOTYPE NOTES                     |                                |                     |                                 |
|-------------------------------------|--------------------------------|---------------------|---------------------------------|
| Note                                | Comment                        |                     | Note                            |
| Hopper Side Construction & Features |                                |                     |                                 |
| 55                                  | Offset side                    |                     | 56                              |
| 59                                  | Clamshell hopper               |                     | 60                              |
| Gondola Ends                        |                                |                     |                                 |
| 57                                  | Drop end                       |                     | 57a                             |
| Boxcar Roofs                        |                                |                     |                                 |
| 61                                  | Hutchins                       |                     | 62                              |
| 63                                  | Dreadnaught                    |                     | 64                              |
| 65                                  | Viking                         |                     |                                 |
| ABBREVIATIONS                       |                                |                     |                                 |
| MODEL MANUFACTURERS                 |                                | MODEL MANUFACTURERS |                                 |
| ACC                                 | Accurail Models                | SMD                 | Spring Mills Depot              |
| ATH                                 | Athearn Models                 | SUN                 | Sunshine Models                 |
| ATHG                                | Athearn/Genesis                | STW/BOW             | Stewart/Bowser                  |
| ATL                                 | Atlas Trains                   | RR                  | Robin Rails                     |
| BAC                                 | Bachmann                       | SPDW                | Speedwitch Model                |
| BRA                                 | Branchline                     | TIC                 | Tichy Train Group               |
| BO                                  | B&O RR Hist. Society           | WEST                | Westerfield                     |
| BLI                                 | Broadway-Limited               | WKW                 | Walthers                        |
| C&BT                                | C&BT Shops                     | WRTK                | Wright Trak                     |
| E&P                                 | E&P Associates                 |                     |                                 |
| ECW                                 | Eastern Car Works              | PROTOTYPE BUILDERS  |                                 |
| EXT                                 | Exact Rail                     | ACF                 | American Car & Foundry          |
| FOX                                 | Fox Valley                     | BOS                 | B&O Shops                       |
| F&C                                 | Funaro & Camerlengo            | BC&F                | B.C.& FDRY Co.                  |
| LL/P2K                              | Life-Like/Proto 2000           | BALT                | Balto. Car & Fdry Co.           |
| IMR                                 | InterMountain Railway          | CAM                 | Cambria Steel Co.               |
| KAD                                 | Kadee                          | PS                  | Pullman Standard                |
| MDC                                 | Model Die Casting (Roundhouse) | BETH                | Bethlehem Steel                 |
| OMI                                 | Overland Model Import          | H&B                 | Haskel & Barker                 |
| PRO                                 | Pro Custom Hobbies             | GAT                 | General American Transportation |
| PSC                                 | Precision Scale Co.            | MVMC                | Mt. Vernon Manu. Co.            |
| PW                                  | Proto West                     | PRES                | Press Steel Co.                 |
| QC                                  | Quality Craft                  | GRN                 | Greenville Car                  |
| RAP                                 | Rapido                         | SSC                 | Standard Steel Co.              |
| RED                                 | Red Caboose                    | RAL                 | Ralston Steel Co.               |



End view of Bob Chapman's I-7, upgraded from Varney relic

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### **Point of Rocks on the HO Piedmont Division-Conclusion**

**B-8 Baggage Car**

**Concrete Communications Shacks**

**I-7 Caboose**

**P-11 Flatcar**

**F-4bm Diner**

**Modeling the 1926 B&O Freight Car Fleet**

**Poage Automatic Water Column**