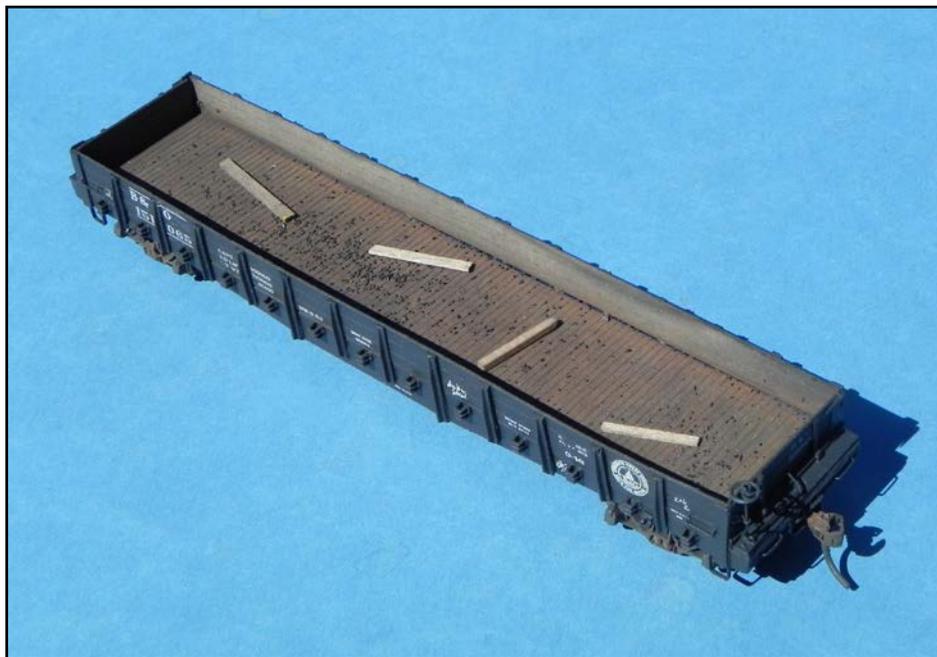
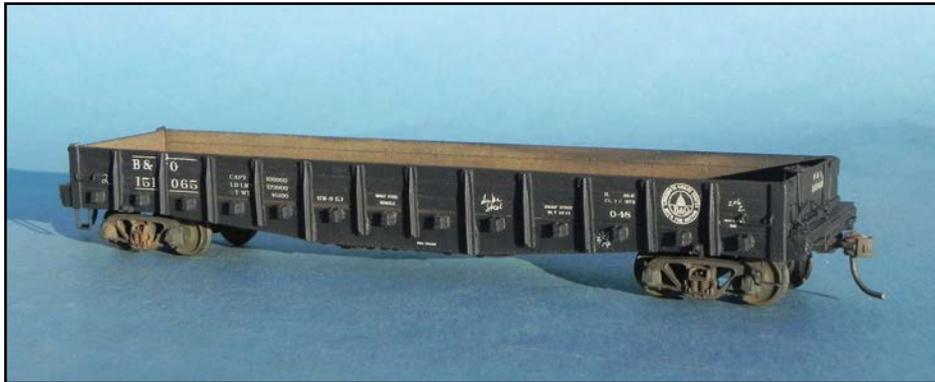


THE B&O MODELER



Number 42



Steam Locomotive Decal Review
Malvern B&O Model Sampler
O-48 Gondola Kit Construction
J. J. Tatum's Hopper Ends
York Locomotive Replicas
B-8 Steam Engines
The Lidgerwood —Model & Prototype
B&O HO Steam Brass Locomotive Models

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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

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Sykesville, MD 21784-1608

FROM THE EDITOR

“Little Joe” the C-16

Or is it “Li'l Joe?” Whatever, Greg Smith deliberately left out the original Varney locomotive from his comprehensive listing because he felt it was too toy like. According to *Greenberg's Guide to Varney Trains* by David Spanagel, Varney's product, based on B&O's nighttime denizens of Pratt Street, was first advertised in 1942. It was the first Varney locomotive to use a Pittman motor (6 volts) and had a die-cast boiler. Running gear was Spartan but could be upgraded with a nice valve gear kit sold by Central Valley. I purchased mine in the late 1950s. By this time the boiler was plastic with a lead weight insert. The valve gear I seem to remember came as a “kit upgrade” and had a stamped metal plate bent into the valve gear hanger. I enhanced it with some details. I also added two plugs for a removable wire connection to a PRR poling car for an extra four wheels of current pickup on my freelanced switching layout inspired by Fells Pt. I also had one of the Rivarossi units that Greg lists as AHM, and I think it was almost as toy like as the Varney unit; it did have valve gear but with huge rivets and would do about 170 scale miles per hour at 12 volts.

The Varney tooling ended up with the English's at Bowser. Until recently you could get this engine from them, but they have discontinued all of their steam locomotive kit line. If you really want to have a model of the C-16, I would recommend that you don't waste your time and money with the Varney/Bowser product, plenty of which are available on the “secondary market.” Instead, Greg lists a couple more desirable candidates, namely the 1973 Gem

(brass boiler) and the 1962-1965 United/PFM release (die-cast boiler). And if you want to have a state-of-the-art Pratt St. Prowler, follow the steps employed by Karl Bond in the January 2013 *Model Railroader* (pages 59-60). Karl starts with the United/PFM (I think the actual model was produced by Japanese maker Sakura) and adds a new NWSL drive train, DCC and sound. Without a tender there probably isn't enough room for a “Keep Alive”-type auxiliary circuit—at least until DCC circuitry shrinks some more. But wait, Karl shows how he so equipped the Mantua “Yardbird” with DCC, sound and a “Keep Alive” in the May 2013 *MR*.

You could use this approach to upgrade one of the C-16a models.



Jeroen Gerritsen's No. 97 from Malvern, 3/2016. Jeroen started with the Bowser/English model and used Bowser's stamped metal valve gear (the Central Valley gear, which I think has a die-cast valve gear hanger, comes up on e-Bay occasionally). He built-up the step pilots, cut out the front cab windows, lowered the cab roof profile and added more details. His label was silent about any mechanism/control upgrades he may have employed. Christopher Slemp photo.

J.J. Tatum

Finally, as an overflow of the last issue's material on the hoppers, in this issue we include a little material on the noted J.J. Tatum. There is much, much more that could be written and, indeed, such a comprehensive piece deserves to be published in *The Sentinel*, from which I guess it would probably also be mandatory that it be reprinted in *Railroad History*. But because of the tie-in to the N-12g hopper car, we are including it in

The B&O Modeler. And to keep with the modeling theme, we have some photos of Bruce Elliott's efforts to model this car specialty. We have more Tatum “stuff” that we may run when we have another modeling tie-in.

John Teichmoeller
Editor

FROM THE COMPANY STORE

Past Issues of *The B&O Modeler*:

Issues in Vol. 1-2 (2005-2006, 9 issues), Vol. 3 (2007, 6 issues), Vol. 4 (2008, 6 issues), Vol. 5 (2009, 6 issues), Vol. 6 (2010, 6 issues), Vol. 7 (2011, 4 issues) are available on CDs from the B&ORRHS Company Store. Each CD is \$10.

Vol. 8 (2014, 2 issues) may be downloaded for the time being as well as issues 40 and 41.

To find these you will need to scroll down to the bottom of the Company Store subject list and click on “Videos and Other Digital Media”) <http://borhs.org/Shopping/index.html>

A link to the free comprehensive index of *The Modeler* prepared by Jim Ford is also found in the CD order section. (Note, this is a *true* index, not just a contents listing. You might be amazed at what has been covered over the last 11 years!) http://borhs.org/ModelerMag/BO_Index_Website.pdf

UPDATES AND ERRATA

Readers are welcome to submit questions about content or information about additions or errors with appropriate documentation.

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

Organizers of other Prototype Modelers meets not listed here are encouraged to send information about their event to the editors.

Mid-Eastern Region National Model Railroad Assn. Convention *Tracks to the Triangle*, October 20-23, 2016 at the Marriot at Research Triangle Park in Durham, NC. In addition to the usual NMRA contest, there will be an RPM room set up. Undoubtedly there will be Bill Hanley B&O models on display and hopefully those of others. See <http://www.mer2016.org/> for registration and the latest convention information.

[Prototype Rails](#) – January 5-7, 2017 in Cocoa Beach, FL

Railroad Prototype Modelers Seminar-East

March 24, 2017--March 25, 2017

Ramada Hotel, Greensburg, PA

For program and registration form go to www.hansmanns.org/rpm_east

(This is the “western” PA counterpart—odd numbered years—to the Malvern/Valley Forge meet, name notwithstanding)

[New England/Northeast RPM](#) – June 2 & 3, 2017 in Enfield, CT

B&O MODELING IN THE ENTHUSIAST PRESS

BY JOHN TEICHMOLLER

We will try to cite articles and product reviews from the enthusiast press of relevance to B&O modelers. Although it seems somewhat uncommon to find critical comments in commercial reviews, we will try to note them where they occur.

“B&O P-34 Flatcars,” by Greg LaRocca. *Railroad Model Craftsman*, November 2016, pages 58-63. This is an excellent article of a scratchbuilt/kitbash of a B&O TOFC flatcar from a class of cars constructed in the B&O’s own shops from wood-side boxcars.

“McAdoos, Mikados, and MacArthurs,” by David Otte. *Model Railroad News*, February 2016, pages 50-55. This is a descriptive review of the Bachmann HO USRA Light 2-8-2. Plenty of photos and no citations of any problems or deficiencies. Nothing B&O specific here, but stay tuned for a more detailed review by David Grover and an upgrade article by Jonathan Vogel in *Modeler No. 43*.

“The Unique Vert-A-Pac,” by David Otte. *Model Railroad News*, June, 2016, pages 22-26. Another descriptive review, this time of the Exactrail HO Vert-A-Pac car, a few of which ran in B&O colors.

“Modeling a Canadian Pacific Alco-Built S-4: RMC/Dremel Kitbashing Award,” by Don Janes. *Railroad Model Craftsman*, May 2016, pages 90-94. No not B&O but this describes some techniques that may be useful for detailing the older Atlas S-2 and S-4 switchers.

“Route of the Strata-Dome Dieseliners,” by David Otte. *Model Railroad News*, May 2016, pages 46-55A descriptive review of the Walthers Capitol Limited trainset. No critical comments about the models but if you didn’t buy this product, the photos and description may make you want one.

“Kitbashing a Stone Viaduct to Fit a Tight Space,” by Mike Shylanski. *NMRA Magazine*, May 2016, pages 12-25. This is an excellent, lengthy, detailed and copiously illustrated article about building a stone arch bridge based on the B&O’s Tray Run Viaduct.

“Strata-Domes and sleek E units highlight Walthers HO scale Capitol Limited,” *Model Railroader*, August 2016, pp/ 60-62/ Non-critical product review by Dana Kawala. Prototype information and references and descriptions of the models. Two-page photo spread shows the whole train.

NEW PRODUCTS

BY CLARK CONE

Policy on New Product Notices and Disclaimer

A model is a representation of reality. It is up to the purchaser to decide what level of prototype fidelity is acceptable. As our readers are probably aware, we do not generally receive “review samples” of newly issued B&O models. Accordingly, we will do our best to cite new B&O scale models as notices appear in enthusiast publications, with whatever prototype information is available. At the same time, we realize that manufacturers will never stop pasting B&O identity on patently incorrect models. We will certainly make a conscientious effort to make readers aware of such apparent discrepancies and will at the same time try to avoid having our comments sound like product bashing. We invite reader commentary or feedback and certainly full blown reviews. The basic principle of *Caveat Emptor* should prevail!

July 2016



Bill's Train Service (B.T.S.) is releasing a B&O style fire hose house. For accuracy, the kit used standard Maintenance of Way drawing no. 7686, dated August 1906. It consists of laser-cut basswood, cardstock, and plywood with decals and brass castings. For more information, see <http://www.btsrr.com/bts7750.htm>



WalthersProto will release a 70' ACF arched-roof baggage car, Ready To Run, in the B&O blue, gray, black scheme, in December. No prototype class is indicated in the announcement. \$69.98 Specify Part # 920-17360. See <https://www.walters.com/70-acf-arched-roof-baggage-car-ready-to-run-baltimore-ohio-blue-gray-black>.



Accurail has released several new HO scale freight cars including this B&O 70-ton triple-bay hopper car with offset sides. Cars of this basic AAR design were built in the thousands from the late 1930s until the early 1960s. See announcement here: http://accurail.com/accurail/CATALOG/2016/2016_June.pdf.



Broadway Limited is scheduled to deliver a group of Baldwin Sharknose diesel units late this year. Individual units as well as A/B sets will be included in the release. The HO scale models will be equipped with Paragon3 Sound for DC/DCC. See <http://www.broadway-limited.com/paragon3baldwinsharknose.aspx> for more information.

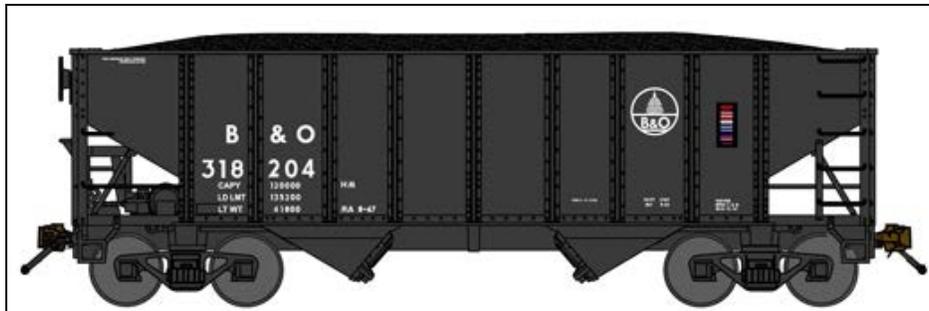


Spring Mills Depot has released an HO scale ready-to-run model of a B&O class N-34 wagontop covered hopper car. Features include wire grab irons, metal wheelsets, and Kadee couplers. The thoroughly researched and well-detailed model will be available in six lettering schemes including early to late-1940 Kuhler (left), late-1940 to mid-1945 wartime Kuhler scheme, 13 Great States scheme, 1953-1955 early billboard scheme, mid-1950s billboard scheme, and 1957-1962 late billboard scheme. Eight road numbers will be available for each scheme.

For additional information visit <http://www.springmillsdepot.com/141001.htm>.

Spring Hill Depot is also releasing new versions of the I-5c/d cabooses.

See <http://www.springmillsdepot.com/i-5fullpaymentoptions.htm>

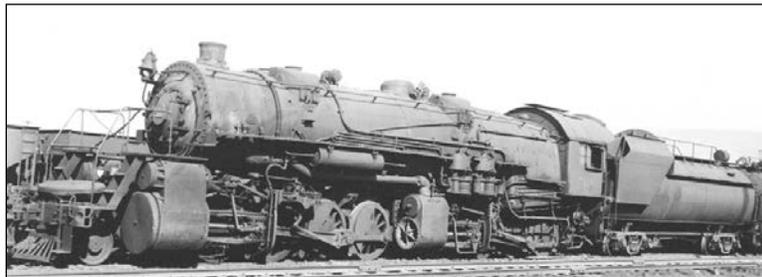


Bluford Shops showed a test shot of a newly tooled 33-foot 8-panel twin-bay open hopper car at the National Train Show. Features of the N scale ready-to-run model include injection molded plastic sides, ends, and hopper doors; diecast slope sheet-hopper bay-center-sill assembly, molded brake tank, valve and air lines; body-mounted brake hose detail, removable body-mounted knuckle couplers, and appropriate trucks with Fox Valley Models metal wheelsets. Three road numbers each will be available for Baltimore & Ohio. Preorders are being accepted now for delivery in the first quarter of 2017. For additional information visit bluford-shops.com.

Morning Sun Books has released a digital version of *Trackside Along the Baltimore & Ohio 1957-1958 with Edward P. Griffith*. The book was originally published as a hardback in 1990. Details are available at <http://morningsunbooks.com/pages/the-morning-sun-trackside-series>.



Walthers is scheduled to release an EMD GP7 diesel (1957-mid-1960s, blue, gray, black) late this year. The Proto series ready-to-run locomotive will be available in four Baltimore & Ohio numbers. The WalthersProto GP7 will have SoundTraxx(R) Tsunami(R) Sound & DCC. Advanced reservation for the limited-run diesel will be available. Expected: 28-Dec-2016. Details are available at <https://www.walthers.com/products/emd-gp7-w-soundtraxx-r-tsunami-r-sound-dcc-baltimore-ohio-3400-1957-mid-1960s-blue-gray-black>

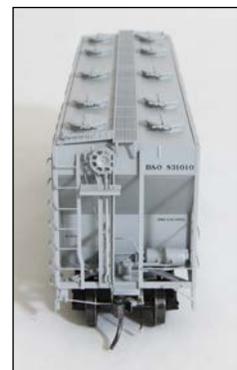


3rd Rail will release an O scale EL-3 and EL-5a 2-8-8-0. Built for main-line service, these HUGE 2-8-8-0 articulateds were delivered in 4 batches over a 20-year period. Sunset Models is going to produce a model of the EL-3 as Compound Mallets (with huge low pressure front cylinders) as they were pre-1927, and the EL-5a as a simple-expansion 4-cylinder locomotive as they ran post-1927. Your reservation is what makes these projects happen, so if you want one, don't just sit there, reserve one TODAY!!! Click <http://www.3rdrail.com/reservation.html#BOEL3> to learn more.



Tangent Scale Models has announced more new paint schemes for their HO scale, General American 4180 “Airslide” covered hopper in B&O “Original Gray 1968”, in 4 numbers. Check 'em out:

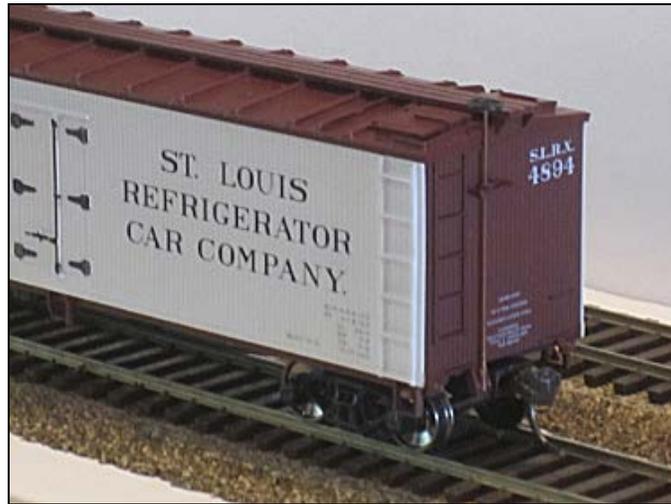
<https://www.tangentscalemodels.com/new-release-gatc-4180-airslide-covered-hoppers/>



Available from **Tangent Scale Models** is their HO scale, Pullman Standard PS-2 covered hopper in B&O “Original Gray 1963”, in 6 numbers. Check 'em out: <http://www.tangentscalemodels.com/product/bo-original-gray-1963/>



Also available from **Tangent Scale Models** is their HO scale, Pullman-Standard PS-2CD 4740 covered hopper, in 6 numbers. These hoppers were frequently seen in unit grain trains on the B&O. Landmark owned several grain elevators in Ohio with this one lettered for their Columbus, OH elevator. Check 'em out: <http://www.tangentscalemodels.com/product/wm-original-gray-1967-ps4740-covered-hopper-copy/>

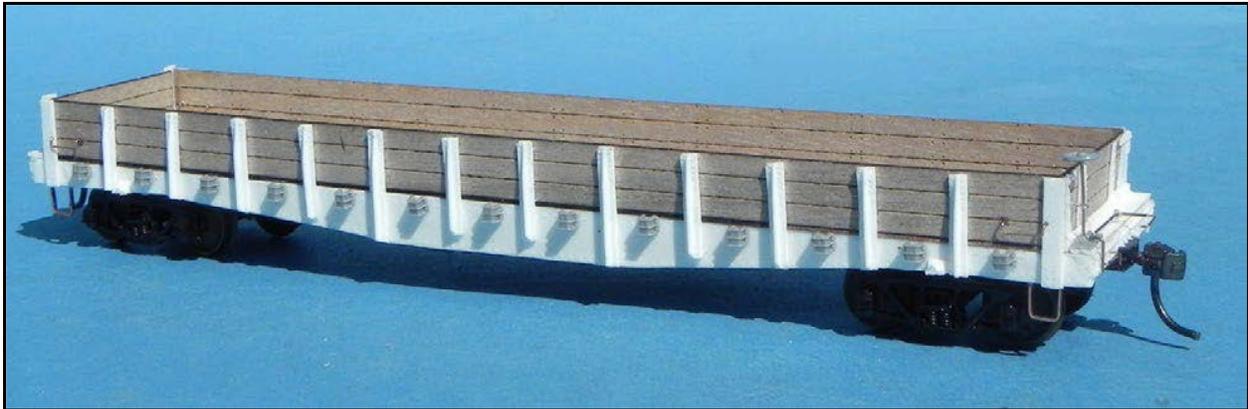
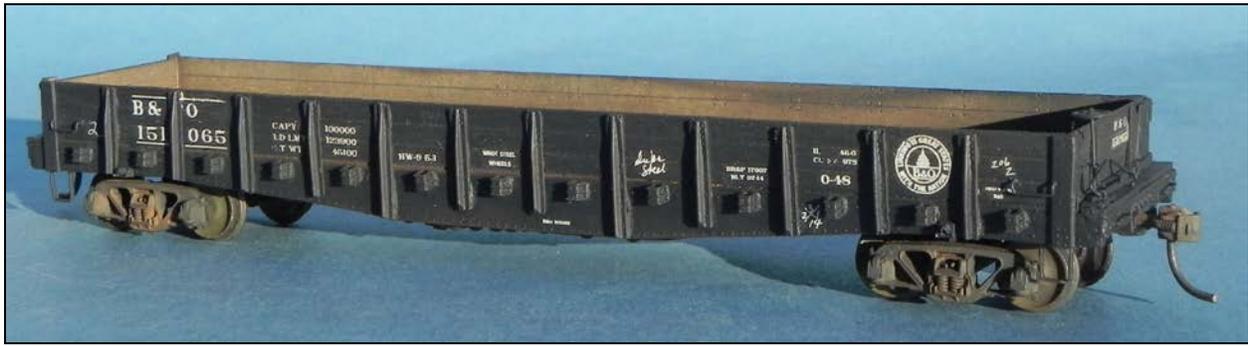


The **Mid-Continent Region of the National Model Railroad Association** is offering as its current car project a set of six 40-ft wood refrigerator car kits lettered for the St. Louis Refrigerator Car Company. The cars are produced by Accurail and include trucks and Accumate couplers. Car numbers in this set are 4265, 4317, 4280, 4302, 4894, and 4836 and unique to this project. St. Louis Refrigerator Car Company was established in 1878 by Anheuser-Busch Brewing Company to transport its products across the U. S. and it's likely that some of these rolled eastward out of St. Louis and onto B&O tracks. At its peak about 1920 the reefer fleet was made up of over 5000 cars. The build date on these cars is 10-42. The cars are priced at \$25.00 for one car, \$24.50 each for two cars, \$24.00 each for four cars and \$23.00 each for all six cars. Shipping is USPS flat rate based on the number of cars ordered. To order contact: <http://www.mcor-nmra.org/Regional-Car-Kit.php>

Monroe Models has acquired AIM Products—this is relevant because the AIM product line includes among other items, exquisite plaster castings of HO B&O single- and double-track brick and stone tunnel portals. Here's their website: <http://www.monroemodels.us/>



Bachmann has released a group of N scale passenger cars with fluted sides. Available now is an 85-foot observation car and an 85-foot coach, both with lighted interior. Also available is a 72-foot baggage car. The ready-to-run models have an aluminum finish and are decorated for the B&O. The ready-to-run models have full skirts and are equipped with trucks with metal wheels and Bachmann's E-Z Mate Mark II couplers. For additional information contact a dealer or visit bachmanntrains.com. No prototype is claimed.



An HO kit for the B&O class O-48 composite gondola is available from the **B&OHS Company Store**. The 3rd Quarter 2016 *Sentinel* contains an O-48 photo study showing many variations of the prototype for reference and inspiration. The kit is reviewed elsewhere in this issue of *The Modeler* by Bob Chapman. The Buffalo Rochester & Pittsburgh (BR&P) took delivery of 500 gondolas during summer 1914, numbered 17000-17499. After the B&O leased BR&P in 1932, B&O classed these gondolas as O-48, numbered 151000-151495, the number series compressed for four early casualties. It took until 1938 for B&O to repaint and renumber all these gondolas. The last two B&O O-48 gondolas remained in revenue service until 1954. While O-48 gondolas comprised a small series amongst much larger B&O car fleets, they came into prominence when upwards of 300 O-48 gondolas were reassigned to non-revenue service during 1948-1953. These gondola rescues nearly filled the X-700 to X-999 number series, replacing older open top cars as crane boom cars, coal supply cars, portable refuse bins, and general purpose company material carriers. Some X-series O-48's lasted into the 1970's, hence these cars command keen interest for most B&O modeling eras and B&O layout sidings everywhere, not just those interested in the "BR&P era."

This HO kit has been crafted exclusively for B&ORHS by master kit maker Chad Boas and is composed of (1) resin structural and detail parts, (2) laser cut wood sides, ends, and floor, and (3) Tichy wire grabs, AB brake system, plastic stirrups, and plastic stake pockets (26). As with most such kits, they are sold without trucks and couplers. Prototype O-48 gondolas came delivered with Andrews trucks, and some later rode with cast side frames, what modelers call "AAR style," or "Bettendorfs." Customer-supplied Accurail truck side frames would suffice. BR&P modelers may seek some additional Tichy stake pockets and substitute K-brakes as customer-supplied supplements. Detail Associates lift rings or home-bent equivalents come in handy also.

Different decal sets for either B&O or BR&P were produced by Mask Island Decals exclusively for the B&ORHS and are sold separate from the cars. Each decal set contains enough graphics to letter two gondolas. The BR&P set includes as-built and later service lettering. Extensive graphics in the B&O set allow modelers to choose X-series company service and revenue service numbers with “Linking 13 Great States” or “B&O Billboard lettering”. Also included are large and small ampersands for “Billboard” lettering. Savvy modelers will instinctively note that this B&O decal set is prime hunting ground to poach scarce decal snippets for other projects. The BR&P set may be the only HO scale BR&P set of any kind. See the Company Store website for pricing and ordering. But don’t wait—only 30 kits were produced and at least 10 were sold at the Buffalo convention. The 10-page instruction sheet for this kit was written by Bob Chapman and edited by this modeler and is substantially identical to the kit review in the Sentinel issue. For additional information, go to <http://www.borhs.org/Shopping/index.html>

NEW PRODUCT REVIEW

HO and O Scale B&O Steam Locomotive Decals produced by Ed Sauers

Ed Sauers has been offering B&O steam locomotive decals for a while now, and it's time this fine product gets more publicity. They currently are available in HO, and cost \$11.00 a sheet. As a professional locomotive model builder, I have to do a lot of decaling and have used the Walthers, Champ and Micro Scale sets quite a bit. We lost the Champs, but Ed's is in a number of ways an improvement over the Micro-Scales.

Ed relied upon B&ORRHS documentation, and it seems he consulted with Ed Kirstatter, also of our Society, in developing the decals. The result is very faithful type designs representing some uncommon knowledge of how B&O steam markings were done. Then too, the decal set includes valuable supplements like some BR&P and B&OCT decals. Some small items such as the loco class designation for the lower cab side sheet are "ganged up" so you don't have to endure the tedium of putting it up, one or two characters at a time, and which, for many of us, must be done under magnification. Loco classes start with A-2 4-4-2 Atlantics down through V-4 4-6-4, an experimental Hudson. A very large host of sub-classes is included, attached to the main classification—such as P-7e, Q-4b, etc. Beyond that, there is the really uncommon stuff—such as "odd" and even "odd-a."

So far I have received three orders of the HO decals, and the sheet size has varied. The most recent sheet is about 3 ½" x 8 ½". The sheet will decal four locomotives (3 B&O and 1 B&OCT), and beyond that will supply many, many other models with various tid-bits, including numbers, letters, classification identifiers or "Cap."heralds. There is a good variety of such markings, and a great quantity of them. I am impressed by how small the smallest characters are. There is clarity throughout the 4 sheets I have seen. Sharp edges, and a lack of "drops"—where ink fails to print are a sign of having been printed well. Ed's characters go below size-wise what my former custom decal maker of 20 years was able to do. The decals comply with the B&O's 1942 and later specifications for locomotive and tender markings. These included lower case characters and the switch from traditional gold paint to du Pont's "Dulux Gold" paint. This new, final steam scheme was started with the T-3 Mountain loco project. One uncommon, but very sensible feature of these decals is that the characters were printed first in white, with registration marks, which then controlled printing over the white with the yellow Dulux gold ink. This is a smart move as yellow decals can sometimes be translucent (especially if you print your own on a dot matrix printer). It keeps the black substrate from reducing value (darkening) the yellow, when the decals are on your locomotive. Instead what you get is a good, strong, appropriate color. The decals are user-friendly and are forgiving if you have to juggle things a bit. The film is thin, and disappears well, and settles around rivet heads and into shallow crevices very well. They respond well to Solvaset but do not become crippled, shriveled, or tear when softened up by a bit of Solvaset. There is no residual haze, or silvering after you're done. I assume reasonable behavior on the part of the decaler when I say that. If you like to slide decals, they slide. If you like to wield a decal at the end of paint brush, they'll do that well, too.

The hobby, B&O included, is going through a bunch of changes. Some are ominous. We are losing paints, and we are losing decal sets. Scratch building, kit building, and just plain model work will survive. Indeed if current economic trends continue, more of us will return to the work bench—where the HO scale hobby began. Ready-to-Run came down to us from toy trains; it has always been with us, and always had strong appeal to people who like to own and run small trains. Ready-to-run becomes more widespread when the money is there. People re-discover how to make things when frugal times set in. Painting and decaling

aren't hard. Just takes some practice, like any skill, to acquire. Will save you money, and give you a lot of satisfaction—which is what a hobby is about.

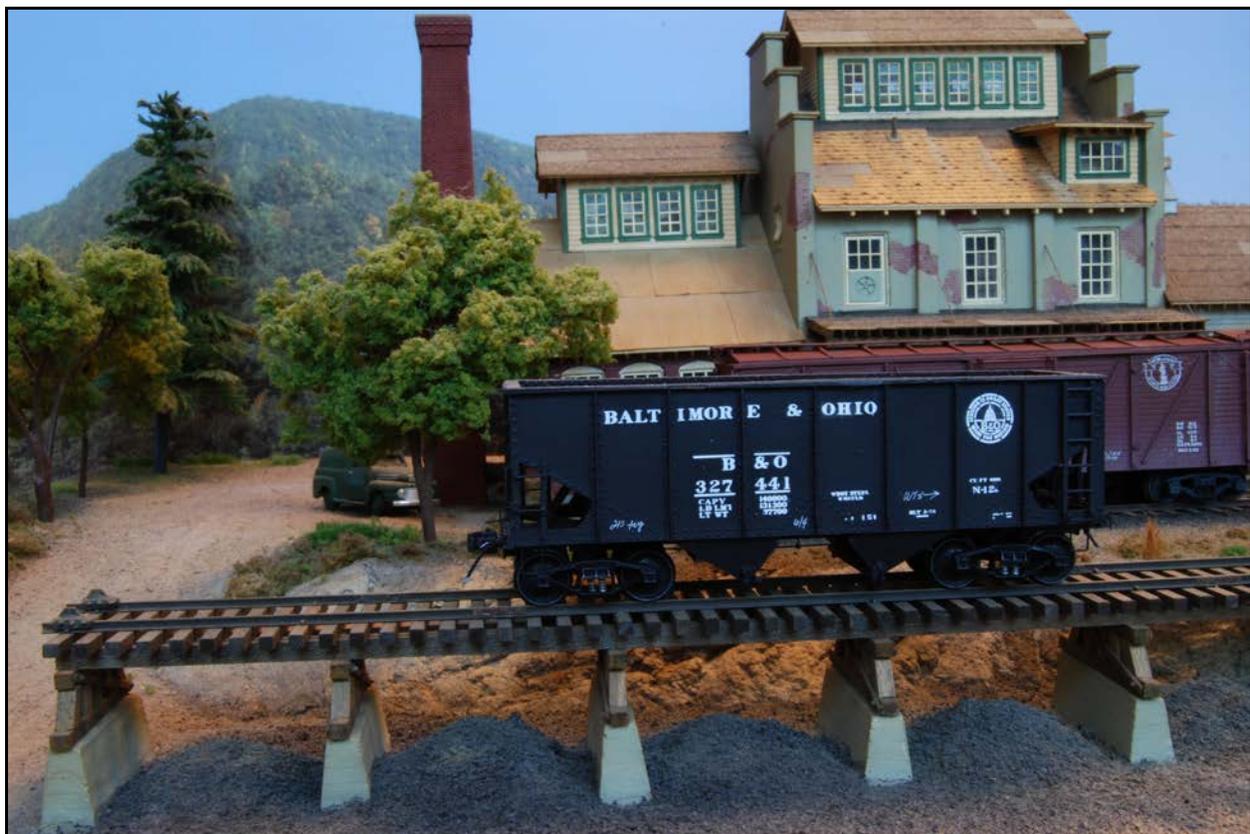
Although Ed's B&O steam decal sheet will do most any post-1942/3 B&O steam locomotive, it will not do the Cincinnati for obvious reasons. This set puts a lot of easy-to-work-with capacity at your fingertips for the money. If you decal locos, chances are you have Champ, maybe even old Walthers, and certainly Micro Scale in your collection. This set is still a must, and it can help you use up existing lengths of tender road name decaling.

While many of the old work horse decal makers have closed their operations down, new opportunity arises for people like Ed, who are close to their customer base, who know their subject matter, and who care about it very much. We have this excellent set because one of us, with help from others of us, made it so. This has brought about an important step forward in B&O steam locomotive decaling. At \$11.00 a set, this is very good value. They are also available for O scale. Check with Ed at dockside98@gmail.com for the price of the O scale set and to order the HO set.

Review by David Grover / Eddystone Locomotive Co.

FROM OUR READERS

Bill Hanley sent the accompanying photo of his F&C N-12g No. 327441. I shared it with Ed Kirstatter who pointed out that the "Thirteen Great States" monogram had an open, not a closed, ampersand. Bill responds, "Nit pickers can rest easy as that herald was removed and replaced with one having a closed ampersand from Ed Sauers' decal set." JT



NEWS AND OUTREACH OF B&O MODELING ACTIVITIES

BY JOHN TEICHMOLLER

The Railroad Reaches Mt. Ida

On a drizzly Sunday, May 21, 2016, Historic Ellicott City, Inc. (HEC) sponsored a small celebration of railroads at their headquarters Mt. Ida. Mt. Ida is an historic house on Sarah's Lane behind the Howard County Courthouse in the Ellicott City Historic District in which HEC has their headquarters. The occasion was the 186th anniversary of railroading in America according to an article about the event in the *Baltimore Sun*. Admission was \$5 a head for adults, kids were free.

The “New Windsor [MD] 1.5” Scale Group” showed off their electrically powered wrecking crane and a wagontop boxcar. They had four other pieces of their 1 ½” scale equipment there plus a 3 ¾” scale Shay. The Western Maryland Railway Historical Society and our own society were also in attendance albeit somewhat hidden in the basement—in fact we almost left the site before discovering them. Craig Close represented the Company Store and Harry Meem supervised the modular switching “Inglenook” with which he delighted numerous young railfans. JT



Wreck crane X215 lifting a 1 ½” scale truck.



1 ½” scale boxcar No. 1872 Good thing Yahoo list moderators didn't visit to audit the road number/class designation/color combination. For product information (\$1,200 for the kit) see p. 3, *B&O Modeler*, Vol. 2, No. 2.

MALVERN RPM MEET MODEL PHOTOS

BY JOHN TEICHMOLLER

Another eastern Pennsylvania Prototype Modelers meet, commonly referred to as “Valley Forge,” was held at the Desmond Hotel in Malvern, PA, from March 18 through March 20, 2016. For some reason this year, lighting in the model room was challenging. However, we were able to round up acceptable photos from Allen Young (AY), Eric Hansmann (EH) and Christopher Slemp (CS). Labeling and descriptions of models at these meets tends to be uneven, and it’s not always possible to tell what belongs to whom. However, as best as I could identify them, there were B&O models on display from Geroen Gerritsen, Bill Hanley, Matthew Hurst, Fred Lass, John Johnson and Dave Messer. I probably missed someone. I was particularly impressed by the array of models from Geroen—I didn’t even realize he was a B&O fan. It always vexes me how many modelers don’t put their contact information in case someone wants to discuss one of the models. Hey, what’s wrong with an e-mail?

Next year’s corresponding meet will also be the last weekend in March in Greensburg, PA.

Bill Hanley from Raleigh, NC, is a frequent presenter and author in the enthusiast press including *B&O Modeler*. Only one of the photos of his models in the display came out usable but here is a shot of Bill, himself. (EH)



Fred Lass’s display (CS and AY) of detailed steam locomotives, some but not all of them B&O.



Another photo of Fred Lass's display (CS and AY) of detailed steam locomotives, some but not all of them B&O.



Display of detailed B&O open hoppers by Geroen Gerritsen (CS)



W-1 hopper by Geroen Gerritsen. He upgraded a Bowser PRR H21 with "old style" doors by adding top reinforcing chord, modifying end beams and replacing the cast-on grabs with ladders. (AY)



I-1 No. 307 by Geroen Gerritsen. Started with Pro-Custom Hobbies (Quality Craft) kit; used only the basic wood frame and most castings from kit except window castings. Made sides, ends and roof from styrene. Railings, ladders smoke jack were all built up from brass. Window sashes came from a Pacific Mountain Shops kit. (CS)



I-16 No. 2784 by Geroen Gerritsen. Pro-Custom Hobbies (Quality Craft) kit, unmodified. This is a nice kit, and the car has never been done in brass. (CS)

N-34 No. 630431 by Bill Hanley. Funaro & Camerlengo kit. Bill used Kadee No. 178 couplers and mounted the box protruding from the end to simulate a Duryea underframe effect. Paint is Scalecoat II MofW Gray, and decals are Mt. Vernon Shops. Note the Tatum slack adjuster. (CS)



MODELING B&O'S CLASS O-48 GONDOLA

BY BOB CHAPMAN



Late in 2012, prototype modeler Chad Boas developed a line of HO scale cast resin flatcar kits accurately representing prototypes of various railroads. In a few cases, he extended the line by adding gondola sides to the flatcar body, just as some of the prototype roads did.

Among them was the BR&P, whose 46-foot composite gondolas later became B&O's class O-48. Spotting the opportunity, B&ORRHS's officers and directors commissioned a special run of the model for B&ORRHS, with BR&P/B&O-specific details.

As a teaser, Jim Mischke presented a six-page article in the Q3/2016 *Sentinel*, "B&O O-48 Composite Gondola Photo Study," with ten excellent photos ranging from a BR&P builder's photo to retired cars in B&O company service. Much more than a photo study, the article also includes a diagram, year-by-year counts of O-48s in B&O revenue service, and car numbers of survivors in 1961 company service. The stage was set for announcing the model—and, no, you did not miss mention of the kit in the article.

The Prototype

Note: The following information is summarized from Jim Mischke's Q3/2016 *Sentinel* article.

B&O's O-48 gondolas began life as a fleet of 500 cars ordered in 1914 by the Buffalo Rochester & Pittsburgh Railway from Standard Steel Car of Butler, Pennsylvania. Numbered #17000-17499, the 46-foot cars featured composite sides 2'6" in height, drop ends, and Andrews trucks. In general, the design was a flatcar with gondola features added above its deck.

As BR&P became incorporated into B&O in 1932, the 496 remaining cars in the class were renumbered #15100-151495 and designated B&O class O-48. Renumbering was completed in 1939.

The class served nearly intact on the B&O until 1946, with 473 cars remaining in revenue service as of January 1. By January 1, 1950, the class had dwindled to 272 cars, and by the beginning of 1956 all remaining cars had been struck from revenue service.

The low sides and drop ends made the class attractive for a second career in company service as work gondolas, boom cars, or flatcars with sides removed; a 1961 roaster indicates 109 cars in company service. Such cars were renumbered into a series ranging from #700 to #998, and prefixed either “XM” (track speed allowed) or “X” (speed restricted to 30 mph).

Gondola cars were the “pickup trucks of the railroad industry,” versatile in hauling loads including coal, aggregates, structural steel shapes, pipe, poles, lumber, machinery, or scrap metal. It is likely that the O-48s handled many or all of these categories. The drop ends facilitated handling extra-long special fabrications such as steel girders, while the use of the stake pockets accommodated loads such as large pipe, poles, or lumber which extended above the sides. The 50-ton capacity was adequate for most loads, whether minerals or steel.

The composite design did not seem to affect the car’s durability. With a typical service life of 36 years and with a few cars exceeding 40 years, it’s clear that the class was successful for the BR&P and B&O.

The O-48 Kit

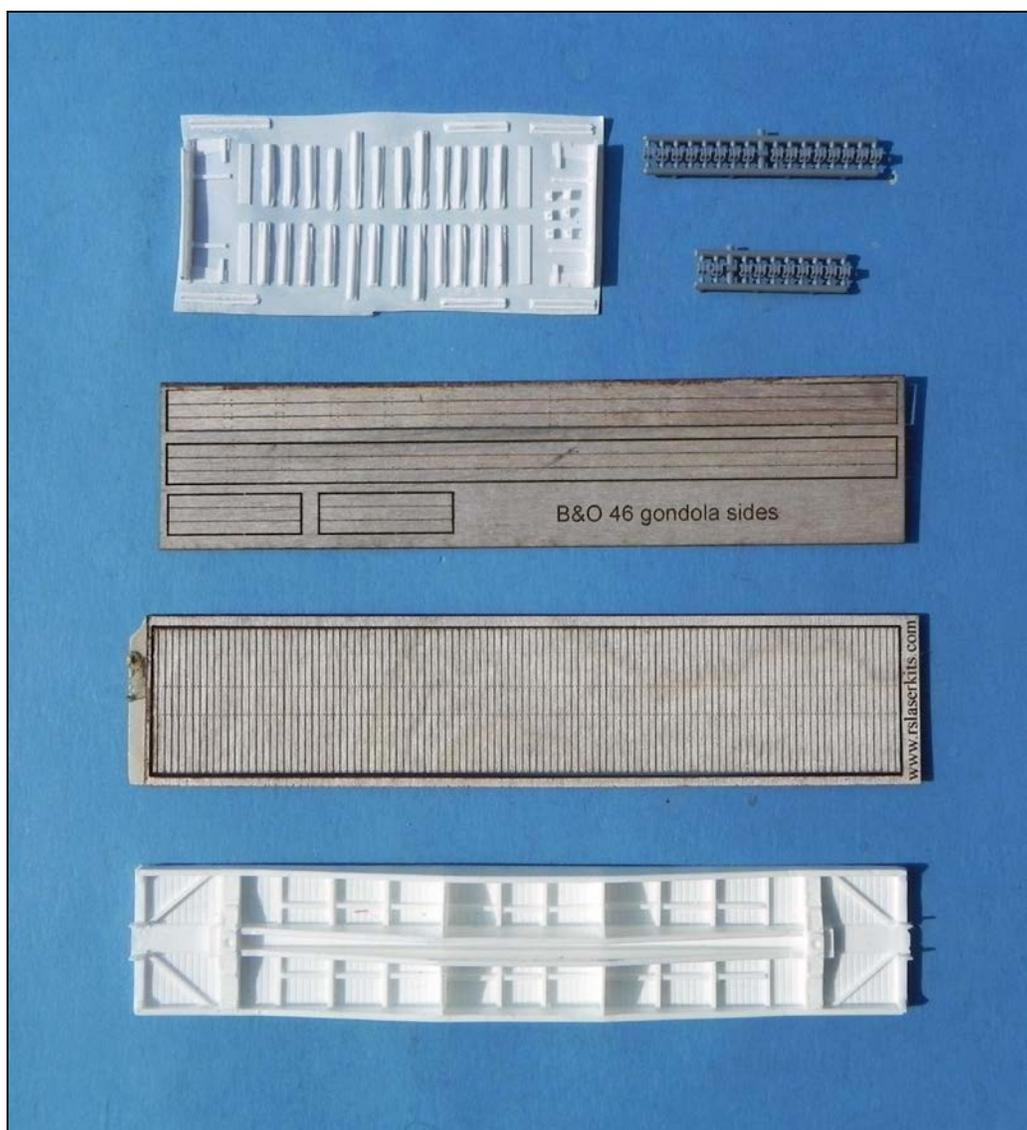


Photo 2 The kit supplies major components such as the cast resin flatcar body, laser-cut wood sides and deck, a sheet of small cast resin parts, and a set of stake pockets. Other parts are supplied by the modeler.

The one-piece cast resin flatcar body features scale-sized rivets on its sides and an underframe with all crossmembers molded underneath. A separate cast resin parts sheet contains smaller parts such as drop end framing and side stakes.

Like the prototype, the sides, deck, and ends are wood, with laser-cut woodgrain, plank, and nail hole detail, both inside and outside the sides.

Twenty-six Tichy stake pockets are provided, enough for the single row of pockets on each side of the B&O car; BR&P modelers will need to supplement with 26 additional Tichy #3006 stake pockets for the double rows of pockets found on each side of the as-built BR&P car. Also provided are a Tichy AB brake system sprue, stirrups, and straight and drop grabs. A few spares are provided in the small cast resin detail parts – a nice touch. The modeler must provide trucks, couplers, and weight.

Custom decals specific to the O-48 are available in two separate sets – one for BR&P and one for B&O. The BR&P set includes 1914 builder's photo lettering and late-1930s BR&P lettering. The B&O set includes lettering for both in-service and company service cars, including the 1946-55 "13 Great States" herald and the later large B&O initials. Dimensional data is specific to the O-48. Accompanying the decals are lettering diagrams – thanks!

Note – while this project is not unduly difficult, it is not shake-the-box. The architecture of the prototype results in a few time-consuming steps, such as installing the side stakes and the 26 stake pockets. Turn on some favorite music and enjoy the ride; you'll end up with a totally cool and distinctive model not likely to be produced in styrene.

Parts Preparation

Remove any residual mold release agent by washing the cast resin parts in a non-oily dish detergent such as Ivory Liquid. It's easiest to do this before separating the small parts from their parts sheet.

On my model, the one-piece flatcar body casting had almost no flash. For the small parts sheet, the easiest way to remove the flash and separate the parts from the sheet is to drag the back of the sheet several times across a sheet of fine (400 grit) sandpaper. After a few passes, the parts will begin to fall away from the sheet, and will be essentially flash-free. Be careful not to overdo this, since the kit provides few spare parts to cover mistakes. Touch up edges as needed with a small file; for the side stakes, an easy way to do this is to grasp the side stake flange with needlenose pliers and file along the edge of the opposite flange.

Underbody

Begin by drilling (#50) and tapping (2-56) holes for the trucks and couplers; for good operation, be sure the drill is perpendicular when drilling the holes for the trucks. To make my #58 scale couplers with standard-width Kadee coupler boxes fit, I had to cut away the wings of the coupler box opening in the endsills. By test fitting your coupler boxes flush with the outside of the endsills, the coupler box holes can be properly located. If your 2-56 coupler screws extend above the top of the floor casting, file them flush.

Drill (#74) for the stirrups. The stirrups are inset from the ends of the sides, matching the inset of the carbody ends. Drill (#74) a hole into the bottom edge of the sidesill casting 1'0" from its end at each corner, and a second hole an additional 1'0" from the first; be careful to keep the drill perpendicular to avoid punching the bit through the sides. Glue the stirrups into the holes.

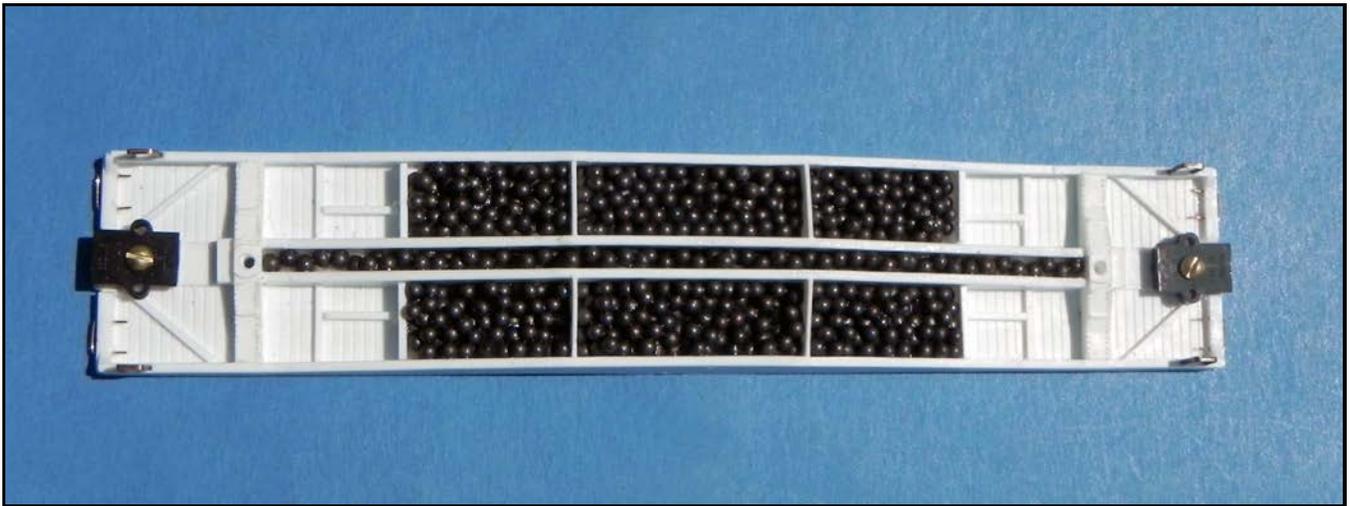


Photo 3 Since underbody detail is not visible under normal viewing, the space was filled with 2.5 ounces of lead shot.

Using the photos as a guide, drill (#76) through the endsill for the endsill grabs. Insert the straight grabs, and glue them from inside the underbody.

I typically model the underbody brake system components that I can see from side-viewing. In this case, with no weight added, the completed model will weigh about 1.5 ounces, far short of the NMRA target of four ounces. With the fishbelly sides completely hiding the underbody brake system components from normal viewing, it was an easy decision to omit the underbody brake system and use the space for added weight.

Several options exist for adding weight, including commercial weights and sheet lead; an appropriately weighted load could also fill this need. Preferring the ability to run the car either empty or loaded, I weighted the carbody with lead shot, adding 2.5 ounces to the unweighted carbody. If using lead shot, avoid handling it with your hands; a folded 3x5 file card is handy for directing the shot into its desired locations (see photo). Short .040" x .080" x 3'6" styrene strips were glued atop the crossmembers near each end to create the pockets nearest the trucks for the shot. Flood the shot-filled cavities with CA to secure the shot.

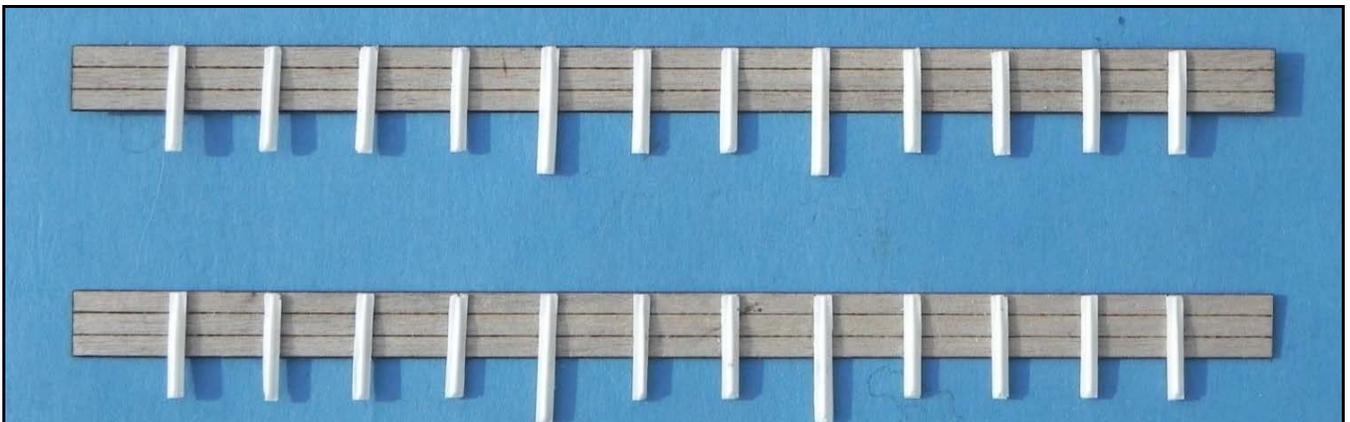


Photo 4 Laser-cut wood sides with cast resin side stakes added.

Assemble the Sides

The parts sheet provides 24 short side stakes and 4 long ones. Since the prototype has 20 short and 4 long, there will be some spares – a nice touch since damage is possible in removing the side stakes from the parts sheet and removing flash from their edges.

The standard mounting of the side stakes is flush with the top of the side, tapered end up. Note that the prototype photos are rife with exceptions, with some side stakes mounted taper down, and some having no taper at all. In this case, it's best to have a photo of the car you're modeling.

The side stakes are located centered on the pairs of laser-cut rivets on the sides (note that the front and back of the sides are identical). Along the sides of the prototype, there are four short side stakes, one long, two short, one long, and four short. A light pencil guideline drawn with a square next to the rivet row will assist in positioning the side stakes perfectly vertical. I found it easiest to make a small pool of CA on a scrap of cardboard, and use a toothpick to run a small bead of CA between the pairs of rivets. With tweezers, add the side stake, making sure that it is correctly vertical and flush with the top of the side.

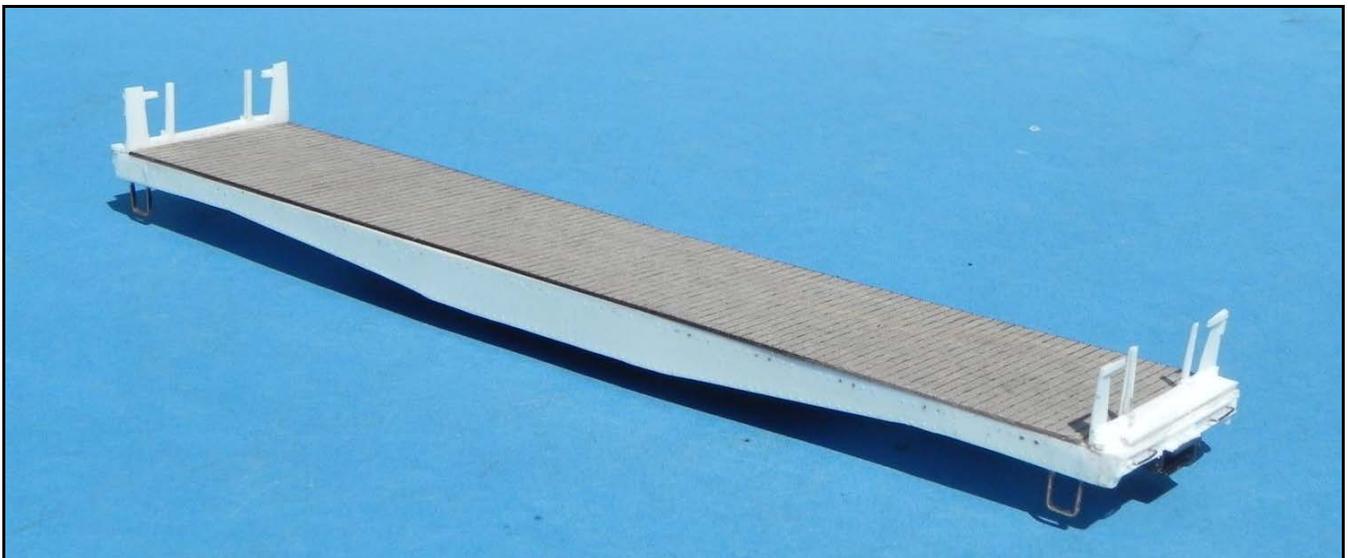


Photo 5 The ends and floor are added to the carbody

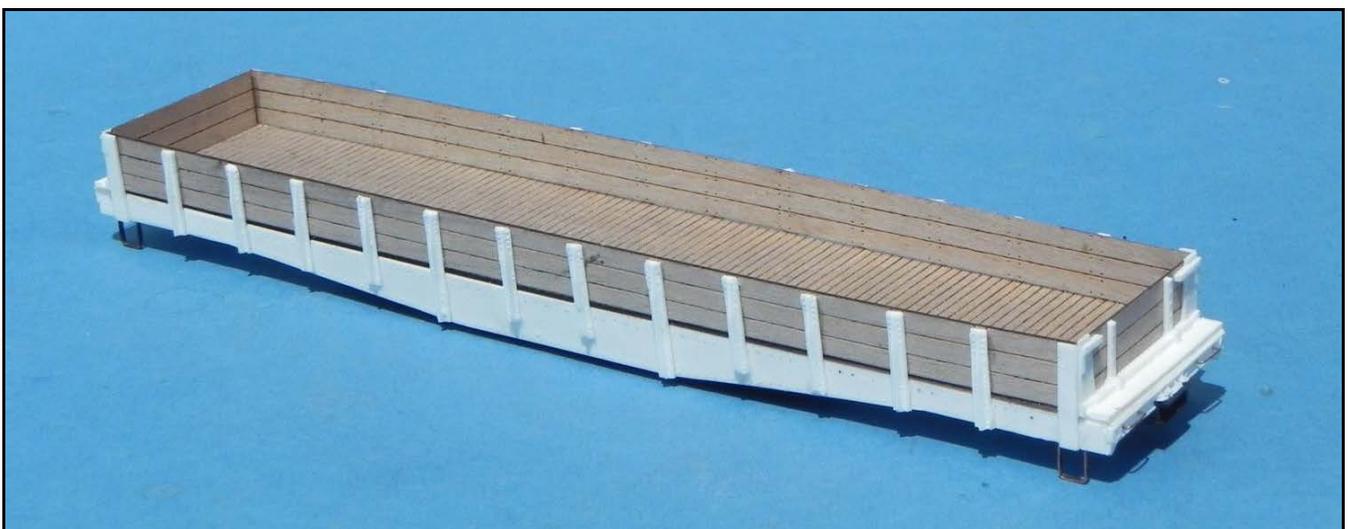


Photo 6 The assembled carbody is ready for final detailing.

Assemble the Carbody

On the prototype, the wood floor nests between the steel end frames, with the ends of the floor boards visible below the wooden sides. Clean flash from the end frames and glue them atop the end sills flush with the carbody end, flange pointed outward.

Trim the wood floor to fit snugly between the end frames. The wood floor is backed with an aggressive pressure-sensitive adhesive; when it gets glued, it stays glued. This means that there is only one shot at getting the floor placed correctly. Line up one end of the floor with an end frame, holding the remainder of the floor in the air. Lower the floor a few boards at a time, checking to see that it is even with the flatcar subfloor on both sides. With time and care, results will be good. If the floor overhangs the sidesill at any point, file it flush.

The slightly oversized sides may need to be trimmed to fit between the end frames; trim equal amounts from each end until the correct fit is achieved.

On my model, the cast resin carbody is slightly swaybacked. To avoid a gap between the sides and the floor at the center, glue the side stakes at each end to the carbody first. When the glue has dried, press downward on the sides and glue the center side stakes. If some of the side stakes protrude, below the bottom of the sidesill, file them flush.

Glue the wooden ends centered inside the steel end frames.

A corner gusset on the side abuts the steel end frame at each corner. On the gusset, the rivet cluster goes at the bottom, and the vertical row of rivets toward the center of the car. Glue the corner gusset to the end of the wooden side, then tack it to the steel end frame.



Photo 7 “B” end detailing.

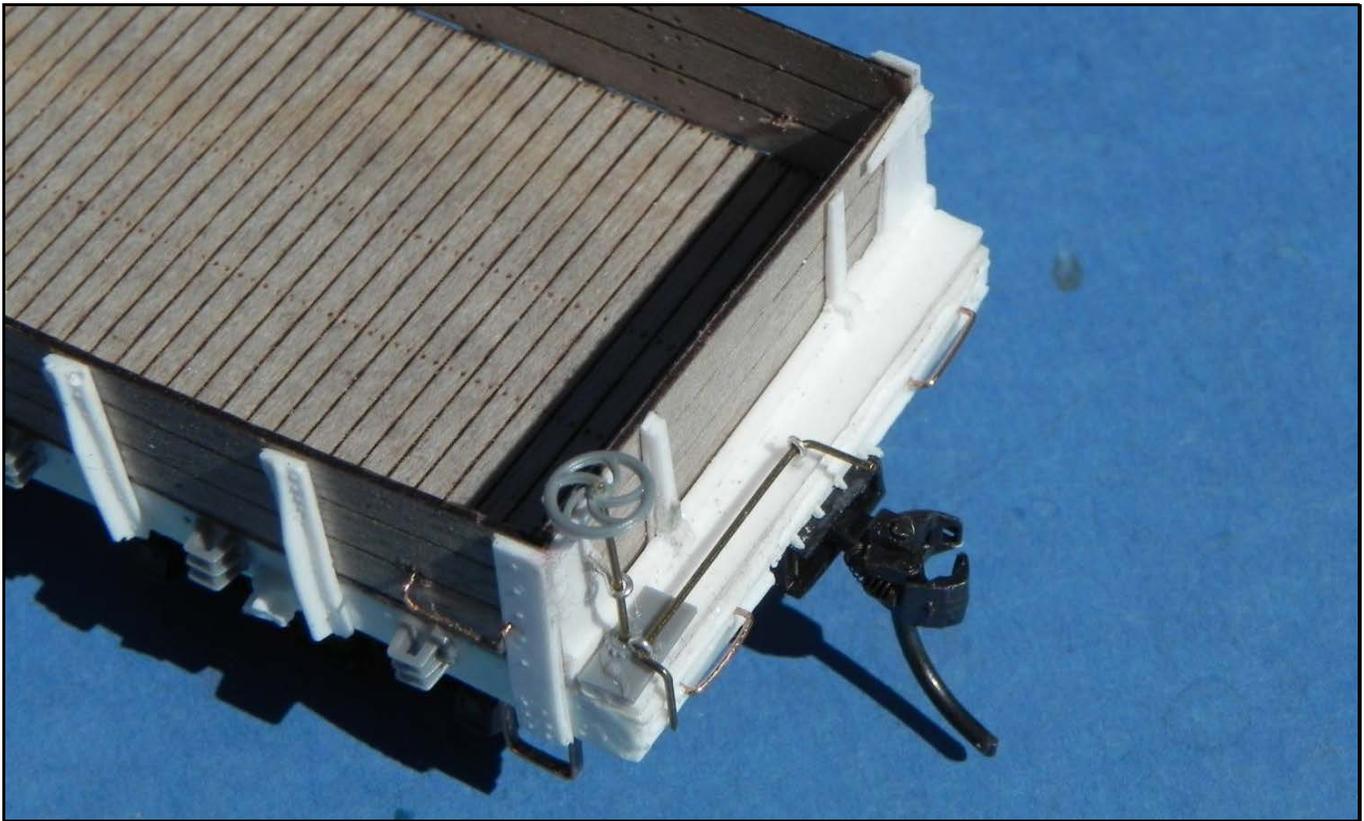


Photo 8 “B” end detailing close-up.

Detail the Carbody

Drill (#76) and mount an 18-inch straight grab at each corner of the side. The inboard leg is located between the bottom and center board of the side; the outboard leg is located just beyond the edge of the corner gusset. Before gluing the grabs, snip their legs so that they don't extend excessively into the carbody interior.

A lifting pad (found on the cast resin parts sheet) is located above each truck, just inside the first side stake. Glue the pads flush with the bottom of the sidesill.

The uncoupling levers are supported by a pair of eyebolts, one atop the endsill's outer edge just inboard of the poling pocket, and the other centered above the coupler. Drill (#76) and glue them in place, then bend the lever (see photos) from wire provided in the kit.

On the B&O, the O-48s had a single row of thirteen stake pockets aligned along the sidesill. The kit provides 26 Tichy stake pockets for this purpose. Note that the Tichy pocket has a top and a bottom, and that the small molded nail hole on the side of the pocket goes at the top. The Tichy pockets have small locator pins on their back, unneeded here; remove them with a small file while still on the sprue.

Place a small pool of CA on a scrap of cardboard, dip the wings of the stake pocket in it, and tack the pocket onto the sidesill flush with its top. The stake pockets are susceptible to being knocked off in operation. As insurance, place a small drop of CA on a toothpick and insert it into the bottom of the pocket; the glue will flow into the joint on both sides, tightly securing it. If modeling a BR&P car, a second row of Tichy stake pockets (not provided) will be needed along the top of the sides.



Photo 10 Left side detailing completed.

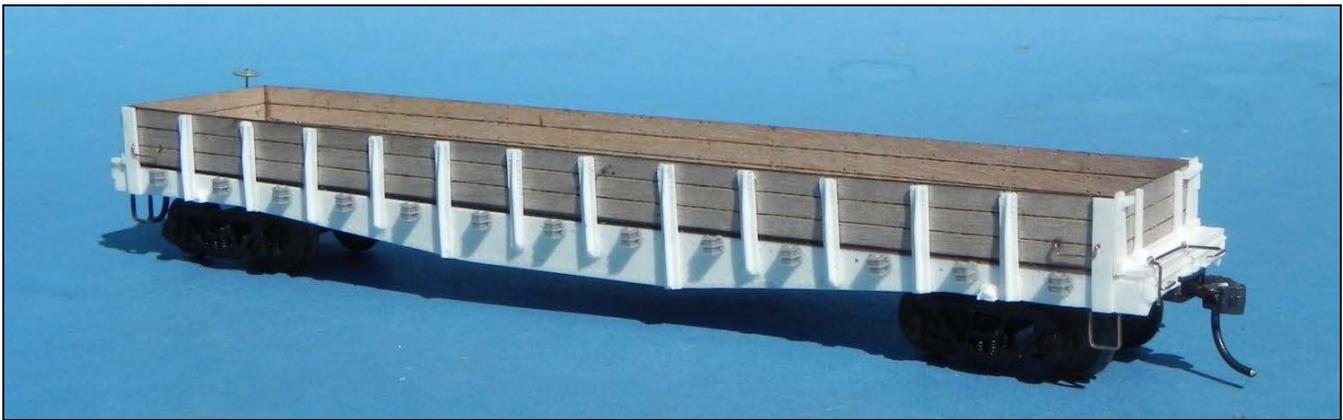


Photo 11 Right side detailing completed.

The prototype was built with a lever handbrake, but for several cars B&O replaced the lever handbrake with a staff handbrake. I have always liked the vintage appearance of a staff handbrake poking above the top of a freight car, so I elected to model this variation.

Select the brake platform with ratchet from the Tichy AB brake system sprue, cut it 1'6" wide, and glue it atop the endsill flush with its left-hand end. Drill (#76) through the hole in the platform and through the endsill. To resist bending with handling, I used hard brass .016" wire for the brake staff; the kit wire can also be used. Cut the staff 4'6" long, and glue a brake wheel from the Tichy AB sprue at the top of the staff. Thread a Detail Associates eyebolt #2206 (not provided) onto the staff, test fit the staff into its hole, and mark where to drill for the eyebolt about 1'0" from the top of the steel end frame. Drill for the eyebolt, and glue the staff from the bottom of the endsill.

Trucks and Couplers

The prototype was built with Andrews trucks, and many retained them throughout their lives; in some cases, the Andrews trucks were replaced with Bettendorf-style trucks as the cars were shopped. Some Tichy #3012 Andrews trucks from my stash were a near-match to the prototype, as are many other good choices from the various model manufacturers.

Install the Kadee #58 scale couplers. Typical of cast resin kits, you'll need to do some testing and fiddling to achieve correct coupler height. My model needed a thick washer at each truck to bring the car to proper height. Now is a good time for a layout test run to assure reliable operation.

Paint and Lettering

Begin with the interior, which should be a grungy color representing weathering and the types of lading the car has hauled – black for some coal dust, gray from rock loads, rust spots from steel or pipe loads, etc. I sprayed my interior with a very dilute grimy black overspray, followed by very dilute rust spray to represent blotches of rust from steel lading. Be careful not to hide the nice laser-cut detail.

I masked the interior before applying the exterior black paint to represent a B&O revenue-service car. I use a lightened black (3 parts Engine Black, 1 part Reefer Gray) to compensate for our typical darker-than-sunlight layout lighting.

Apply a gloss coat, then apply decals using the lettering diagrams and prototype photos as a guide. The decals are a case of good news and bad news. The good news is that the decals are VERY thin, allowing them to easily conform to the wood-grain on the sides. The bad news is that the decals are VERY thin, requiring very careful handling as they are applied.

Additionally – is it my imagination, or is the blue decal backing paper getting lighter and lighter? I struggled to read the smaller lettering while on the backing, requiring great care in cutting out the decals, and in some cases resulting in a surprise to see what the lettering was as I placed it on the model.

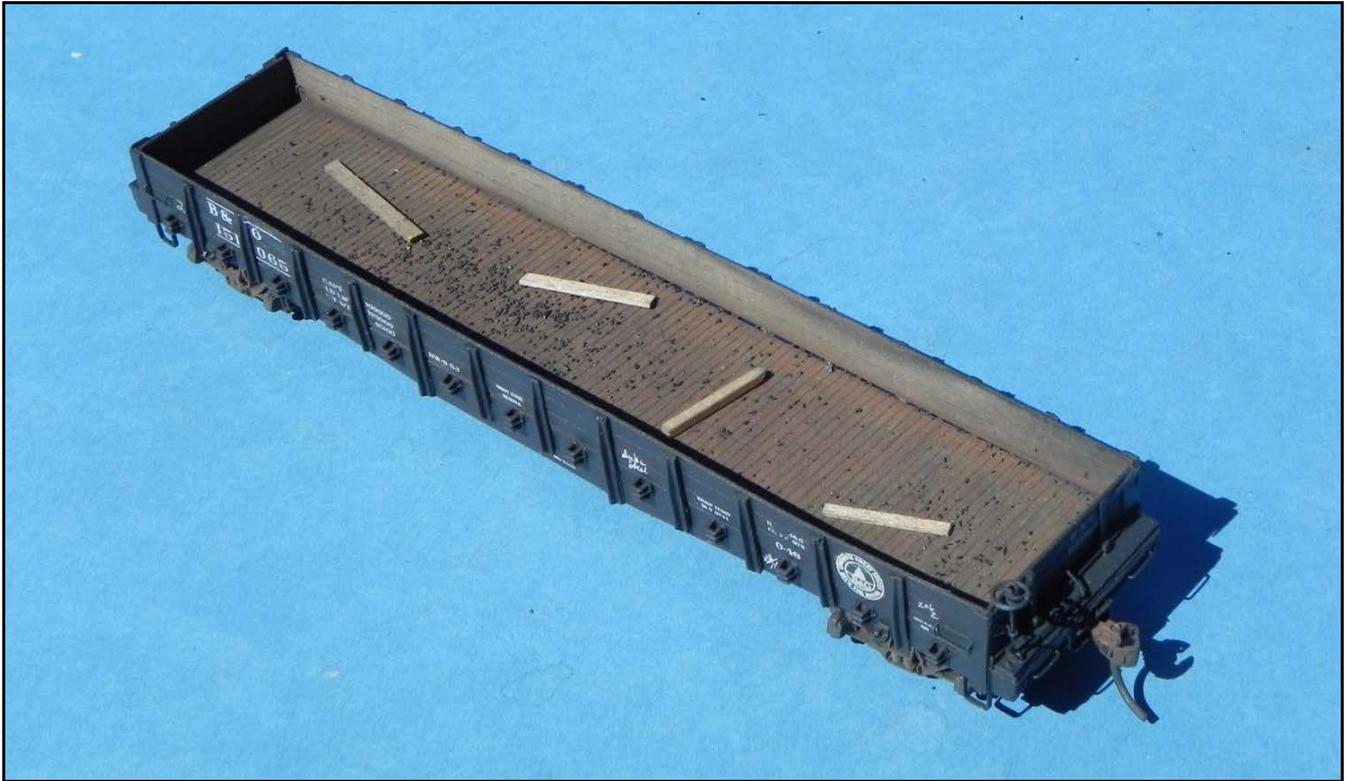
Once the decals were cut out, here's the application technique that worked for me. Immerse the decal in water; if the water is warm, it will release almost immediately. Remove the decal still on its backing. Place a generous pool of water on the carbody side panel where the decal will be added; the excess water will help float the decal from its backing. Lay the decal and backing face-up on the side, and with a toothpick carefully slide the decal from the backing; work slowly so that the decal will not bunch up. Remove much of the excess water with a small brush, and slide the decal to its final location. Use Microscale decal solutions to set the decals into the wood grain – first the blue bottle solution, then the red bottle. Allow to dry, poke any bubbles with a pin, and retreat with the red solution.

I lettered my model as in-service car #151065, following the lettering diagram.

Hide the gloss coat with a dull finish such as Testor's Dullcote. A light, very dilute overspray of black will soften the bright white of the decals. Weather the car as desired.

Install trucks and couplers. Weather the interior additionally with grimy, brown, and rust weathering chalks if desired. Gondolas were seldom cleaned; a bit of debris (wood dunnage, coal lumps, cinders, etc.) from various recent loads will add to the realism of the interior, whether you run the car loaded or empty. Your O-48 is now ready for revenue service.





Parts List

Manufacturer	Catalog Number	Description	Comment
Detail Associates	2206	Eyebolts	For staff handbrake.
Tichy	3006	Stake Pockets	For BR&P car.
Various		Andrews trucks	
		Couplers	
		Weight	

A B&O B-8 TEN-WHEELER MODEL FROM YEARS AGO

BY EDWIN C. KIRSTATTER
MODEL PHOTOS BY AUTHOR

Prototype

The B&O had many of the small ten-wheel B-8 class with 20" x 26" cylinders, balanced slide valves and 62" drivers. Some were built by the Baldwin Locomotive Works and some in their own Mt. Clare shops from 1891 to 1893. They were numbered 1342 to 1399, and they lasted into the later years in modified forms as classes B-8a, B-8b and some classed B-8tob. The latter were rebuilt in 1896 adding inclined fireboxes and 66" drivers and the subclass acquired the name of "Toboggan." They all started out with Stephenson valve gear between the frames, but five had Walschaert gear added, being reclassified (four) B-8a and (one) B-8b. One engine had its boiler superheated in 1936 with a B&O type, which required piston valves to be added. That was the one and only B-8b, engine number 1383.

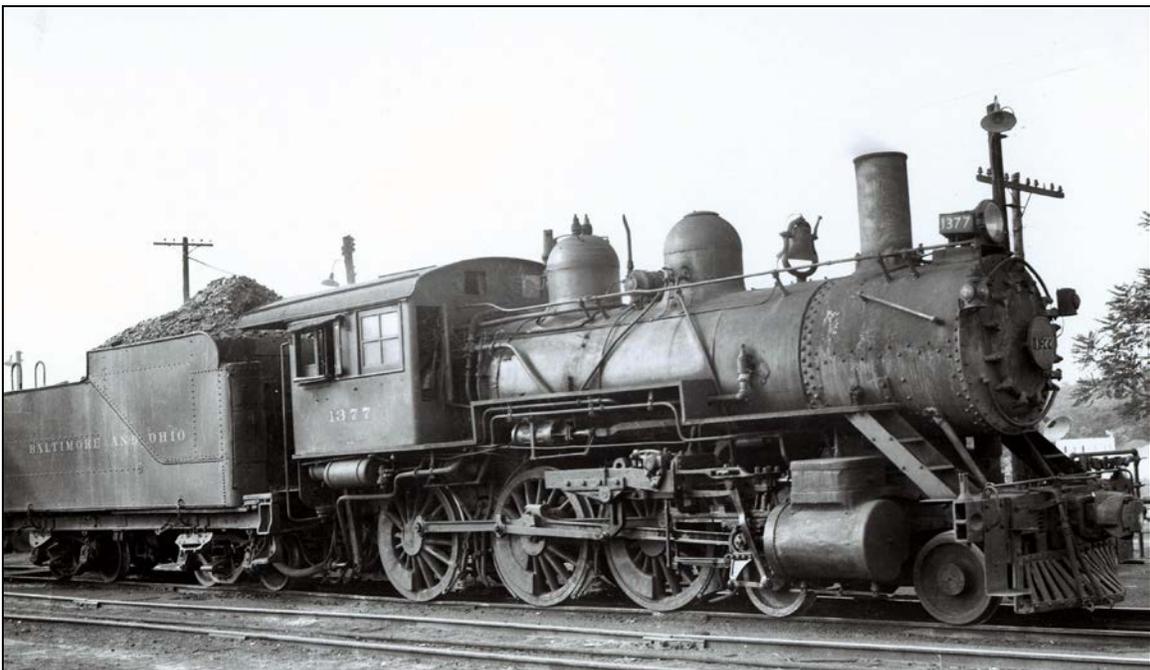
A few of these engines lasted into the later years of steam operation, working out their lives on the branch lines in West Virginia of the Ohio River Sub-Division where there were light bridge loadings that only allowed these 140,825 pound engines to operate. Their tractive power of only 24,300 lbs. was ample for the short trains on these lines. There were only five left on the roster in 1950, and the last two were retired in 1951.



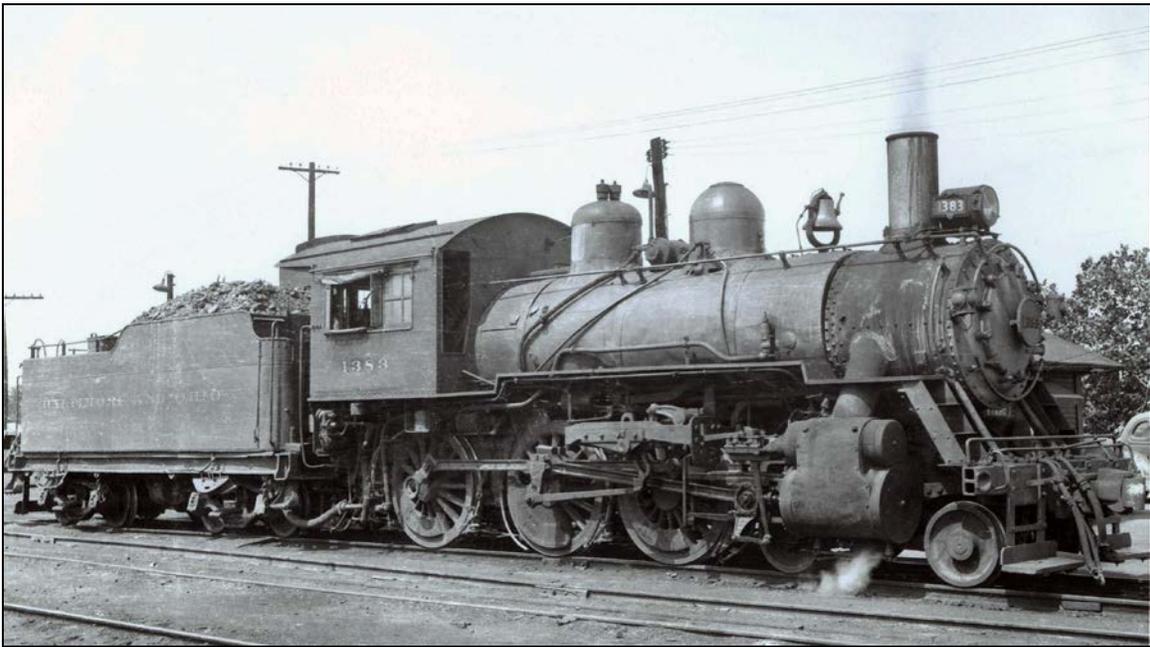
The subject of my model 1373 is shown here at Parkersburg, WV on August 11, 1940. It is one of the B-8 class built by Baldwin Locomotive Works in 1893, now modernized with electric headlight, steel cab and larger tender. According to *Steam Locomotives of the Baltimore & Ohio, An All-Time Roster* by William D. Edson, 1373 was scrapped in August of 1947. Edwin Kirstatter's Collection.



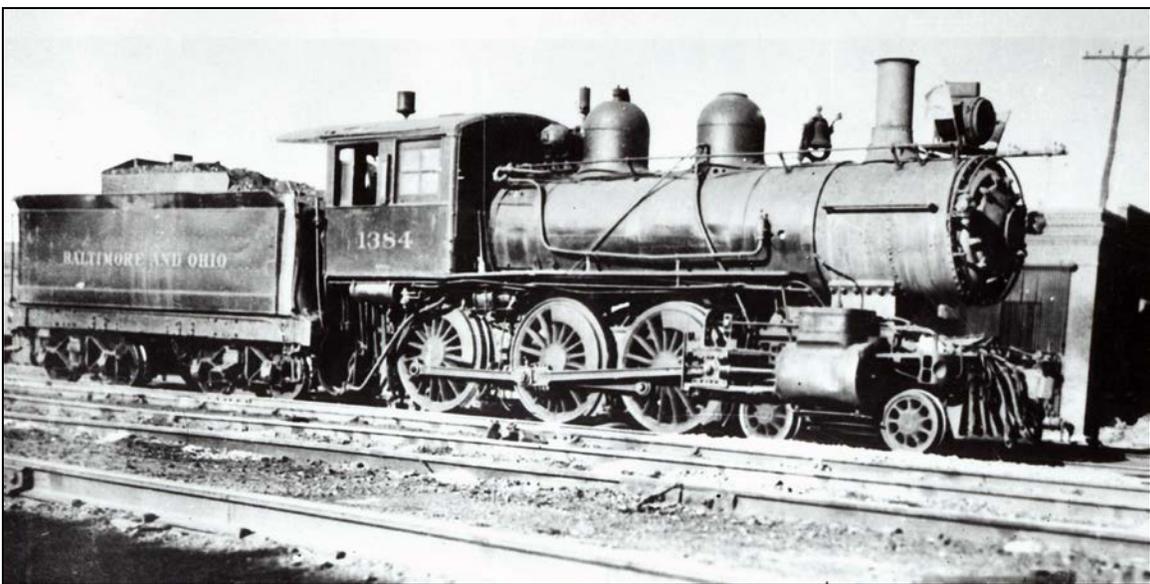
Another nearly left broadside, again of 1373 taken at Clarksburg, WV in July 1939. The new steel cab has a hood at the rear where they hung winter curtains. The squared off driver counter weights are really visible here with the side rods in the upper position. Malcolm McCarter photo.



A right-side view of 1377 at Kenova, WV now a B-8a class in September 1948. This shows the power reverse gear that was installed at the same time as Walschaert valve gear which replaced the old Stephenson type between engine frames. From photo collection of H. K. Vollrath.

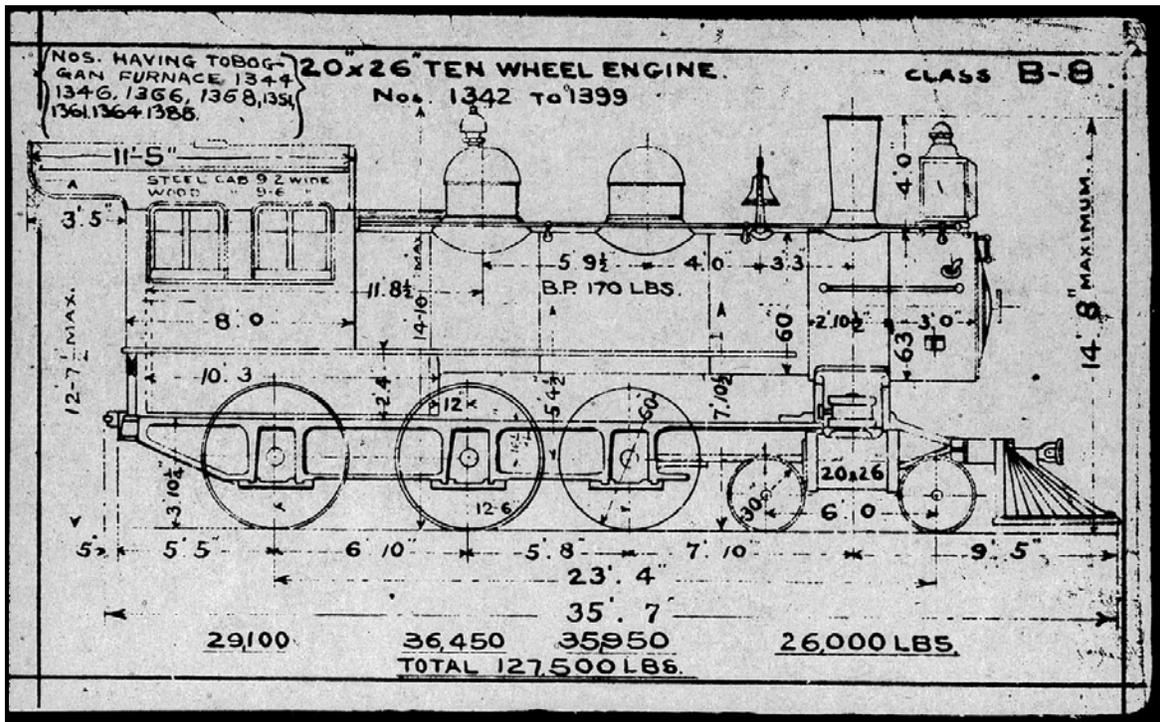


At Kenova WV in September, 1949 we find the only B-8b class 1383 that has new cylinders with piston valves. The Walschaert valve gear was added as well as the boiler being superheated at the time of its rebuilding. Kenova is at the far south end of the Ohio River Branch across the river from the lower point of Ohio. Note the pulley wheel over the center of rear driver to drive a belt to the speed recorder above under the cab. H. K. Vollrath collection.



At St. George, S.I., NY in this old view of October 24, 1920 is 1384 a class B-8tob. Reclassed from a B-8 in 1896, it was out of service by 5-25-33. The subclass "tob" was added because of the inclined fireboxes replacement known as a "Toboggan." At this time this engine still has its original wooden cab and small tender. That unusual device above the rear of the cab was part of the Eames vacuum brake system used at that time on the Staten Island Rapid Transit passenger cars. A J. Lavelle photo copy from H. Barr.

All photos from collection of Edwin C. Kirstatter.



General Model Background and Detail Overview

I acquired this model from a now long-deceased friend way back in the 1950s. This was a kit-bash before that term had ever been coined. This HO model was built of many pieces from several model companies of those days as well as considerable building of parts from scratch. The major parts came from the Model Die Casting Co.'s. 0-6-0 switcher, a Southern Pacific prototype. These were the boiler, with its smoke box front and the cab. All of these are die-cast from Zamac, a zinc alloy. The drivers came from Mantua Metal Products Co. with different counterweights added of the square ended type to suit our prototype. The tires on these are steel not brass and will grip the rails better. The plastic engine truck wheels are from Varney. The tender trucks were arch bars from Silver Streak with brass wheels and the leaf springs added as well as brass wipers on axles for better electrical pickup. Some of those companies are still in business now but in different forms or management, but in any case, all of the above parts are available on the "secondary market" for those ambitious enough to undertake this project.





Guidance

This is not a blow-by-blow construction article and doesn't have to be. The modeler had used as a guide to build this model an article from *Model Railroader* magazine of January to June of 1948 by Mel Thornburgh of his building an O scale model of this B&O class B-8 4-6-0 engine, serialized in six parts. The dimensions in those articles were in fractions of inches for O scale, so it was a challenge to convert these to build a HO model from those. But at least Mel provided a good road map.

Tender

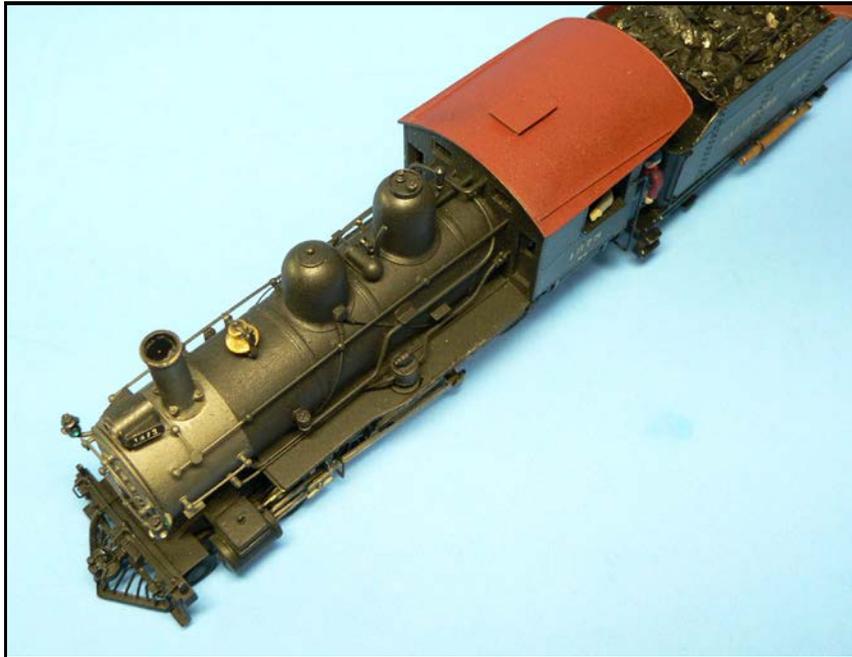
The basic tender was a total scratch building effort, made from tinplate with hand pressed rivets and some brass. Trucks and front steps from Varney. The tender is a B&O "Number 10" type of 7000 gallons of water and 18 tons of coal, a size used on many of the smaller locomotives and the E-27s. Its coupler at rear is a Kadee #5. It's a very nicely detailed model that includes handrails, grab irons, a well-detailed coal door, poling pockets, cutoff lever. There is a penstock spout hook, (as shown on a B&O drawing) hanging on the coal bunker's back board and a clinker rake thrown on top of the coal pile, held from falling off by a special bracket.

I did a little more enhancement. It needed drains at the back corners of the back deck. The deck was very thick brass, but I drilled drain holes to give the look and depth. I also added at top of the front water legs water shutoff valves made in brass by Precision Scale Co. I drilled down into these and fastened parts in with CA since the model was already painted and I didn't want to solder these and then have to repaint it. It has enough weight to make it track well and give good electrical pickup. It does not have a headlight for backing; those were added to most B&O locos in later years. That would require running an electrical conduit to the rear of the tender. There is no way to get to inside of this model's tender so I wouldn't be able to try making it work.



Mechanism

The engine drive chassis was scratch built from brass using a Pittman DC-60 open frame motor; can motors hadn't been invented yet. All of the drivers are sprung but not the way later brass imports were. The springing is adjustable too. The cylinders were made from brass to look like the prototypes with scratch built crosshead guides, main and side rods and a valve rod that does not work. The cylinders do not have cylinder cocks perhaps because they are notched out at front to give more swing for the engine truck to negotiate sharp curves. This truck has a centering spring arrangement to help guide the locomotive in curves. The coupler at front is a working scale knuckle automatic one made by MDC. These looked good but did not operate consistently; it is OK to use here as I do not intend to double head this engine or switch from this end. The finely detailed pilot beam has a coupler-lifting lever that could work if it had too. I'll add a link between this coupler and the bar above. This bar was too short and I had to remove it and make a new one from brass wire and shaped correctly this time. If I get the ambition, I'll add lubricator lines from under front of boiler jacket down to the fittings on the flat steam chest just like the real ones. Brass wire of .006" should do. The pilot is the old fashioned "cowcatcher" type, a bit archaic, but it looks nice and it has an air brake hose hanging down across it. Many locomotives in the later days had footboards added to them, for the convenience of the switching crews, replacing these old bar types.



Boiler Details

The original MDC boiler had cast on piping, stack, and domes, and these parts were removed. Those were replaced by scratch built parts hand turned in a drill *ala* Thornburgh. A working bell was added from Lindsay Products, an early maker of lost wax investment cast model parts. It has a turned brass bell but the frame and clapper were cast from sterling silver back then. Its scratch built headlight also works with illuminated side number boards. It has a homemade switch on top of the motor to turn it on or off. Its number that it shows is 1373 the same as the B&O engine picture that illustrated the *Model Railroader* construction article (two other photos of the same engine are reproduced above). There is an electrical conduit going to a junction box in the handrail beside it. Nearby are classification lamps from MDC that have white and green jewels in them. The smoke box was painted with real graphite mixed with paint. The smoke box front with its 15 lugs on the door is not like a B&O standard design of 12 lugs, but it will

have to do. It wasn't until later that Kemtron, Cal-Scale, Cary and others brought out many finely detailed cast brass parts that could enhance this old model. I did add a small valve by Cal-Scale in front of the steam dome that was used for testing the safety valves. The whistle at back of the steam dome does not have an operating lever or rod back to cab. I will not be able to fix this now without harming a lot of paint.



The cab was also molded in that zamac metal back in those days and consisted of five pieces fastened together with self-threading screws. This was way before MDC converted that 0-6-0 model to plastic. [One wonders why, for all the other work he did, the builder neglected to cut out the forward cab windows. JT] The modeler rebuilt the roof with an overlay to more closely resemble a B&O roof that these B-8 ten-wheelers had. This represents the all steel cabs that replaced the original wooden cabs; there are even armrests at the cab windows. The drawbar also conducts the electrical power from tender to the motor on the engines chassis of an ingenious design not at all like later brass imports. Overall this model looks very much like its B&O brethren.



Survival and Potential Improvements

I built up a cardboard box to store and transport the model. It has a wood floor that is grooved for the wheel flanges to fall into. Despite this care, over the years the model has gotten abused. A few parts have broken off and gotten lost. The paint needs to be touched up here and there, and new decals should replace old peeling ones. I am going to replace the broken off parts and find new rerailing frogs to put back on the tender. I have a poling pole that I scratch built from a toothpick with metal bands on ends to prevent splitting that I'll put on the left side of tender frame. Mine is round in cross section, whereas the real ones were octagonal. A B&O drawing shows these to be made from Oregon fir and its rough size was 6" square by 9' long, and they were used on freight locomotives in local service. I could have used a brass part for this made by Precision Scale Co. I may paint the tender coal space to match the red cab roof and tender back deck. In Thornburgh's article he says to use Indian red paint here. I know that got superseded by freight car brown and later oxide red paints on the B&O. Floquil's Tuscan red came close to matching this.

The dummy coal load will be refurbished with new coal, and I'll have to find figures of the engineer and fireman to put in the cab to help hide the motor that extends into that area, Selley's Finishing Touches by Bowser makes an unpainted set of three, called "crew for steam train, Part No. 81". I will use these for an engineer, fireman and the head end brakeman who only had a jump seat on the left front tender water leg. I'll have to bend or cut off their arms to reposition them and hand-paint their faces, hair, hats, gloves, shirts, neckerchiefs, coveralls and shoes. The jump seat was not there originally, so I made it from brass with a brace below and attached it to tender with a small screw. Then I added seat boxes inside of the cab to seat the other two. I may need to think about adding a shovel, coal pick and a jug of water to tender. I kept the touch up of paint to the minimum. Even-though this model may not be quite up to today's level of details, it's still a very nice looking model of a little-known B&O prototype.

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- B&O Mechanical Dept. Drawing T-22529 Locomotive Tenders, Push Poles for Tenders.
- B&O Mechanical Dept. Drawing T-26586 Locomotive Tenders, Arch Bars for Tender Trucks.
- B&O Mechanical Dept. Drawing T-42428 Locomotive Cab Arm Rest.
- B&O Mechanical Dept. Drawing T-42533 Locomotives Uncoupling Arrangement.
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Railroads of West Virginia, Baltimore & Ohio, TLC 2011.

YORK REPLICA

BY JOHN TEICHMOELLER

It was recently announced that the B&O Railroad Museum was privileged to pay \$120,000 to reclaim the 1927 replica of the "York" locomotive. This replica was built for the 1927 Fair of the Iron Horse and ultimately donated to the Chicago Museum of Science & Industry. I got so-so photographs of this replica in the Chicago Museum in 2008. While I am glad that she's back in Baltimore, it's a pity that the B&O Museum had to pay a ransom to get her back. Meanwhile, keeping with the "Modeler" theme of this publication, I offer two submissions:

1. One of the famous full-size Pangborn models constructed for the Chicago World's Columbian Exposition in 1892, is, or at least was, in the Agricultural and Industrial Museum in York, PA. I photographed it in November, 2011.
2. In ancient days, the firm of Strombecker Models from Moline, IL, produced a 3/8" to 1' scale replica of the York, I believe in conjunction with another one of those railroad expositions. I have a reasonably complete collection of Strombecker Models, some built and some unbuilt, and managed to acquire one of these built up. It is decently assembled and nicely finished with a clear (shellac?) finish. My quandary is, should I leave it the way it is or repaint it, either in the scheme of the 1927 replica or in the somewhat fanciful scheme of the Pangborn model?



Pangborn Model in Agricultural and Industrial
Museum, York, PA



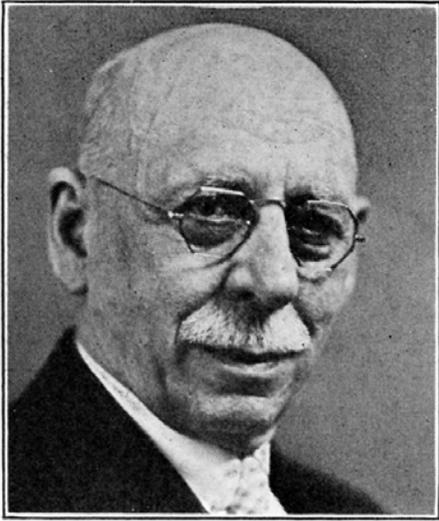
1927 Working Replica in Chicago Museum of Science & Industry



Strombecker Model

J.J. TATUM AND THE B&O'S PROGRESS

BY HARRY MEEM WITH ED KIRSTATTER



J.J. Tatum was a prolific contributor to the mechanical systems of the Baltimore & Ohio Railroad, and his name resonates among those who've studied the railroad, especially its rolling stock.

But some of the things he invented and the Mechanical Department applied to cars generally aren't modeled, possibly because of a lack of knowledge of the man and his devices. And leaving them off is virtually akin to forgetting the Duryea underframes that the railroad applied liberally.

Tatum worked for the B&O for 63 years. In that time he patented 64 devices, from an easier-to-use tack board to roofs for gondolas and high ends for flat cars. Some didn't go very far; others, like Number 1553645 of September 1925 for an "Open-top freight-car end" applied to N-12g hopper cars, were of limited use.

On the other hand, there was Number 2044513 of June 1936, for "Car body construction." It's known today as the wagon-top design, and no modeler of the 20th-century B&O is without a box car, an N-34 covered hopper or a wagon-top caboose, the results of Tatum's design work.

Tatum went to work for the B&O at Mt. Clare in December 1879 as a messenger in the locomotive shops. He was 13. Legend has it that in the years to follow he never took a vacation. After two years he moved to the passenger car department, where his inventive nature began to show itself. His first patent, for a freight car door hanger, was issued in December of 1905.

Tatum was foreman of the Mt. Clare passenger car shops in 1895-98 and general car foreman by 1902; He served as manager of the car repair section of the transportation division of the U.S. Railroad Administration in 1918-20. He finished his career in 1942 as assistant chief of motive power and equipment. He died in 1961.

The list of Tatum patents is long, many of the things he patented didn't catch on, and many aren't visible on models. Still there are enough that we are going to try to highlight the ones that are most visually important to model builders, beginning this issue with the extension for hopper car ends. Several others are available for later, including the slack adjuster for brakes (useful) and a detachable car roof (not so much).

Courtesy of Ed Kirstatter, we have several of the patent applications like the one shown following. If you have any, or know of a source for them, write something up for *The Sentinel* because this is more appropriately part of railroad history and technology.

Tatum Ends

Commentary by John Teichmoeller

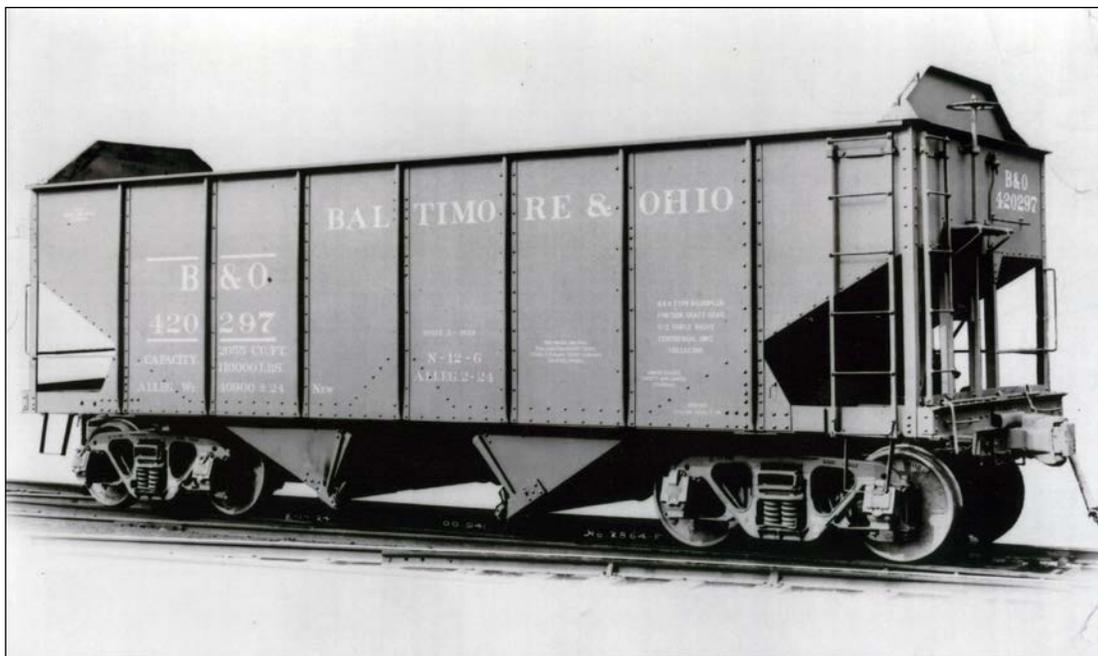
The Tatum End Patent

Ed Kirstatter has located Tatum's patent on hopper car ends:

<https://www.google.com/patents/US1553645>

The patent, granted September 15, 1925, is reproduced here and, with the well-annotated drawings, makes interesting and straight-forward reading. Tatum outlines the practice of extending hopper car ends to protect product loss in fully loaded cars. He notes the ergonomic shortcomings of "staff-type" hand brake mechanisms as well as the problems with standard vertical brake shafts and their horizontal brakewheel's being damage prone. Using a sheet metal assembly, he insets his end slightly into the car to provide a shelter space for the brake wheel. He even suggests the possibility of making the major portion of the end out of vertical or horizontal corrugated material.

According to the railroad's clearance diagram (reproduced on page 34 of *B&O Modeler No.40*), such ends were specified for the last lot of 500 N-12g cars built by Pressed Steel Car in 1924. The photo of No. 420297 shows the car built "ALLEG 2-24." I believe "ALLEG" is Pressed Steel Car's shops across the Ohio River from McKees Rocks near Scott's Run in Allegheny City. The patent refers to the end as an "open-top freight car end" and "heap end wall." This class is believed to be the only one to which this end was applied on the B&O. The concept was popular with other roads, however. In particular I can think of the N&W, C&O and L&N—and there may be more. These other roads' designs as I recall, were much less complex structurally; in most cases the raised portion of the end was integral with the rest of the end sheet instead of being a multiple-part fabrication. I have seen them referred to as "heap shields," and I believe the N&W called them "arched ends" which more correctly describes those used by the C&O. The B&O in its late years did acquire some of the C&O cars with such ends. The C&O and N&W also incorporated a "notch" on the left side of the heap shield to facilitate the brakeman's climb over the end if necessary, rather than applying a grab iron such as the Tatum design shows.



UNITED STATES PATENT OFFICE.

JOHN J. TATUM, OF BALTIMORE, MARYLAND.

OPEN-TOP FREIGHT-CAR END.

Application filed March 12, 1924. Serial No. 698,667.

To all whom it may concern:

Be it known that I, JOHN J. TATUM, a citizen of the United States of America, residing at Baltimore city, in the State of Maryland, have invented certain new and useful Improvements in Open-Top Freight-Car Ends, of which the following is a specification.

It has been the practice in connection with open top freight cars, especially coal cars, to provide heap end walls, which heap end walls extend above the tops of the side walls of the car and thus provide end protection for heap loads when cars are being loaded.

In connection with such heap end walls it became necessary to extend the brake staff above the top of the heap end wall so that the brake wheel could be operated, and by extending the brake staff above the top end walls the staff and wheel were exposed to damage by the clam shells and other unloading devices hitting the staff and making the brake inoperative, which condition resulted in a Federal safety appliance violation, for which the road was penalized.

Another expedient object in connection with the old practice of heap end walls was the use of a brake ratchet lever which is located below the end of the car, lower down than the top of the side walls of the car as well as the end of the car, and on such cars the brake shelf is necessarily located so low on the ends of the car that the brakeman is denied of an opportunity of seeing across the car when it is being switched, making it very difficult for him to gauge or tell when the car he is riding will hit standing cars in the yard or train, which results in serious damage to property and sometimes bodily injury.

The object of my invention is to provide a heap end wall for open top cars which overcomes all of the objections incident to the heap end wall heretofore in use.

My invention consists in providing an open top car with the heap end wall, which is offset, to provide a space for the brake wheel and permit the brake wheel to be located below the top of the heap end of the car whereby it is protected from being damaged by being hit with clam shells and other unloading devices.

In the drawings:

Figure 1 is a perspective view of the end of an open top car embodying my invention.

Figure 2 is a detail view of the end wall of an open top car showing my invention.

Figure 3 is a detail side elevation of Figure 2.

Figures 4 and 5 show other embodiments of my invention.

The reference numeral 1 designates an end wall of a car, and 2 a side wall of a car, said walls having at their proper edges angle plates, 3 and 4, which rigidify the upper ends of the walls and angle plate 4 being secured to the top of the end wall 1. This is standard construction.

The heap, or extension end wall 5 is made from plate metal of the same grade as the side and end walls of the car, and has a flat top edge 6 and sloping side edge 7, the body of the wall sheet 5 being bent outwardly as at 8 to constitute a shelf, the outer edge of which is secured by suitable rivets to the angle iron 4 at the top of the end wall 1. This heap end 5 is further secured to the side and end walls by means of gusset plates 9 which are riveted to the shelf 8 and to the angle irons 3 and 4 of the side and end walls 1 and 2, thereby rigidly securing this heap end wall 5 to the car structure. In order that the heap end wall 5 may be rigid I bend the metal of said wall into flanges 10, which function as rigidifying members to enable the plate 5 to resist the end thrust of the cargo while the car is under service conditions. I secure the hand grab iron 11 to one of these flanges 10 to one side of the car, which grab iron is in convenient position to be grasped by an operator ascending or descending the ladder 12 on the end wall of the car.

It will be clearly seen from Figures 1 and 3 that with this offset in the heap end wall 5 space is provided for the brake wheel 13 on the brake staff 14 and that, therefore, the brake staff need not be extended to any greater length than is now standard in open top cars, thus eliminating any extra expense of increasing the length of the brake staff. The wheel 13 has ample space over the shelf 8 in which to lie and in which to be operated.

This arrangement permits the location of the brake shelf 15 so that the brakeman can stand on the shelf and see across the top of the car when it is being switched and control the speed of the car he is riding to prevent it from making a violent impact against standing cars in the yard or trains,

thereby eliminating damage to the equipment, jolting of part of the lading off the car and resultant injury to the operator of the car from such jolting and from the shifting of the lading over the end of the car.

Further, this arrangement does away with the necessity of using a brake ratchet lever which is located below the end of the car lower down than the top of the side walls of the car, as well as the end of the car, which are mostly built with ends no higher than the sides. On such cars the brake shelf is located so low on the ends of the car that the brakeman is denied an opportunity of seeing across the car when it is switched, making it almost impossible for him to gauge the speed or to tell when the car he is riding will hit standing cars in the yard or trains.

From Figure 4 it will be seen that I may form the heap load extension 15 integral with the car end wall 16, the end wall having the floor flange 17.

In Figure 5 I have illustrated the end wall 18 and heap load extension 19 as being made of corrugated metal, the lower portion of the end wall in this figure being broken away on account of lack of space. Of course, it is obvious that these corrugations may extend vertically or as shown or they may be a combination of vertical and horizontal corrugations.

It is, of course, obvious that changes may be made in the details of construction shown herein, within the scope of the appended claims, without departing from the spirit of my invention.

What I claim is:

1. An open top freight car having end and side walls, a shelf extending inwardly

from the top of each end wall and a supplemental end wall extending upwardly from the inner end of said shelves.

2. The combination with an open top freight car having side and end walls, of a brake staff and wheel extending above the plane of the top of said walls, and a guard extending upwardly from the end walls above the plane of the upper end of said staff and wheel.

3. The combination with an open top freight car having side and end walls, of a brake staff and wheel extending above the plane of the top of said walls, and a guard extending upwardly from the end walls above the plane of the upper end of said staff and wheel, and a hand grab secured to said guard.

4. An open top freight car having end and side walls, a shelf secured to the top of each end wall, and extending inwardly from said end wall, a supplemental end wall extending upwardly from each shelf and having rigidifying flanges at its top edge.

5. An open top freight car having end and side walls, a shelf projecting inwardly from the top of each end wall, gusset plates securing said shelves to the end walls, a supplemental end wall extending upwardly from the inner edge portion of each self, and a rigidifying flange at the free edge of each of said supplemental end walls.

6. As a new article of manufacture, a supplemental end wall for an open top freight car, comprising a vertical plate having an outwardly extending shelf adapted to be secured to the top of the end walls of said type of car.

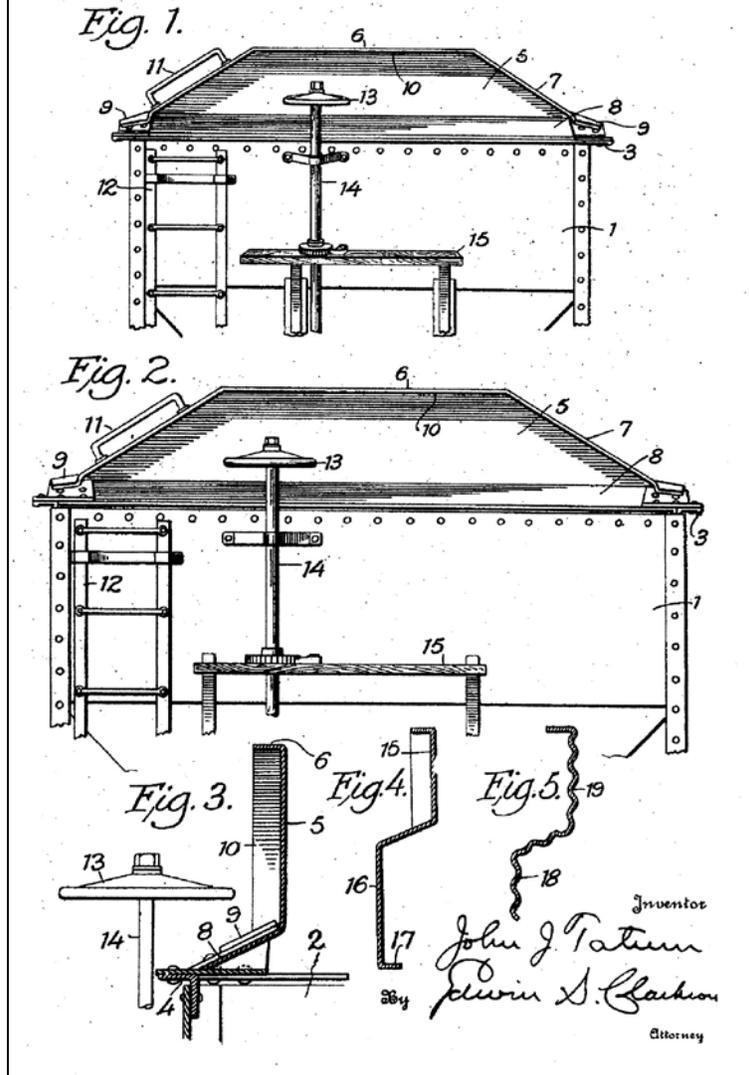
In testimony whereof I affix my signature.

JOHN J. TATUM.

Sept. 15, 1925.

1,553,645

J. J. TATUM
OPEN TOP FREIGHT CAR END
Filed March 12, 1924



Modeling the Tatum End

Bruce Elliott decided to take a crack at applying the Tatum End to his newly-assembled Funaro & Camerlengo N-12g. Model Die Casting once produced several varieties of “add-on” heap shields intended to be applied to their triple hoppers. I had some of these on my parts pegboard and gave them to Bruce but since they were asymmetric he felt they weren’t suitable. He also tried using cut-off end peaks from the Athearn two-bay car but found them too small. Instead he fabricated the parts out of .010” styrene. He bent the ends of the grabs slightly to simulate a bolt attachment point and glued them to the cap strips with cyanoacrylate because it wasn’t possible to drill holes. He has not applied the little triangular gusset plate that doesn’t show in the patent drawing but does show on the photo.



B End



Side View



A End

SOME SNAPSHOTS OF A LIDGERWOOD MODEL AND A LITTLE MORE BY JOHN TEICHMOELLER

In late 2015, Harry Meem put the word out that the B&O Modeler was rising from the grave and material was welcome for publication. Society member Dennis Elliott from Powell, OH, responded by sending Harry some photos of and notes about his scratch-built N-scale model of a Lidgerwood unit.

Here's what Dennis had to say about his model:

"I am sending you two photos of my N-scale model of the B&O Newark, OH Lidgerwood Unit. Refer to the Donald A. Kaiser photo on the inside front cover of the 2013 B&ORHS calendar. The U-2 Lidgerwood Unit that was in Brunswick, Maryland (See page 32 of Vol. 20, No. 3, 3rd Quarter 1998 *The Sentinel*) remained stationary and the locomotive was pulled by a flange wheeled trailer with a knuckle coupler. However, the Newark, OH unit pulls the locomotive because the cable is connected to a fixed unit at the end of the siding (Alex Campbell sent me another photo showing the fixed pulley unit).

"My model is a kit-bash of a Fine-N-Scale Wagon-Top Boxcar body on a modified N-scale Model Power tender frame from one of their Pacific steam locomotives with Tichy Train Group Works car windows and small steel doors. Because it is N-scale, some of the details are not exact, but it will be a good stand-in for the prototype. It still needs some additional decals ('SAFETY FIRST, LIDGERWOOD, WA238?')."

Fine job, Dennis. We are reproducing the photo of the Newark unit from the calendar as well as several other photos from the files. But wait, what is a "Lidgerwood?"

Wikipedia® has a write-up that does a nice and concise job of answering this, but let me offer another summary. The Lidgerwood Manufacturing Company built winches used by various industries. These were applied to railroad use to pull a plow over the tops of flatcars to distribute ballast. The winches were also used to pull locomotives to which metal cutting tools were attached to the brake shoe hangers. By this means they could true the profiles of driving wheel's tires. This saved the hassle of disassembling the locomotive and dropping the wheels. As Dennis notes above, the cable arrangement differed from location to location. The process took place on a dedicated section of straight track next to or near the roundhouse, the "Lidgerwood track." Now, I thought I had in my archives a track diagram of Brunswick in distant years that showed the Lidgerwood track just south of the roundhouse. However, I couldn't locate it, so maybe my imagination has run amok.

I also thought that once upon a time I had read a pretty comprehensive article on Lidgerwoods in one of the enthusiast magazines—*Trains*, *Classic Trains*, *Railroad History*, etc. -- but a non-exhaustive search of the on-line railroad literature index failed to turn up such an article. Perhaps one of our readers has better recall or is a better searcher or maybe said article has one of those cute titles that prevents it from showing up readily on indexes.

Terry Arbogast in his recent book *Old Main Line West of Cumberland, Book 1* offers a photo on page 137 that shows the "Ledgerwood" track at Fairmont, WV. On pages 57-58 he relates an oral history of a train crew member who brought a P-7d 4-6-2 from Grafton to Fairmont to "have its nails trimmed." Perhaps Terry will have some more descriptive Lidgerwood tales in forthcoming volumes.

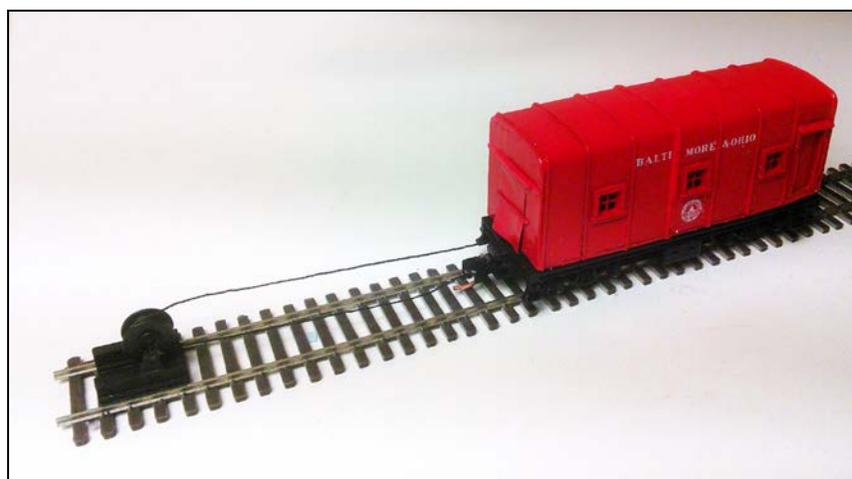
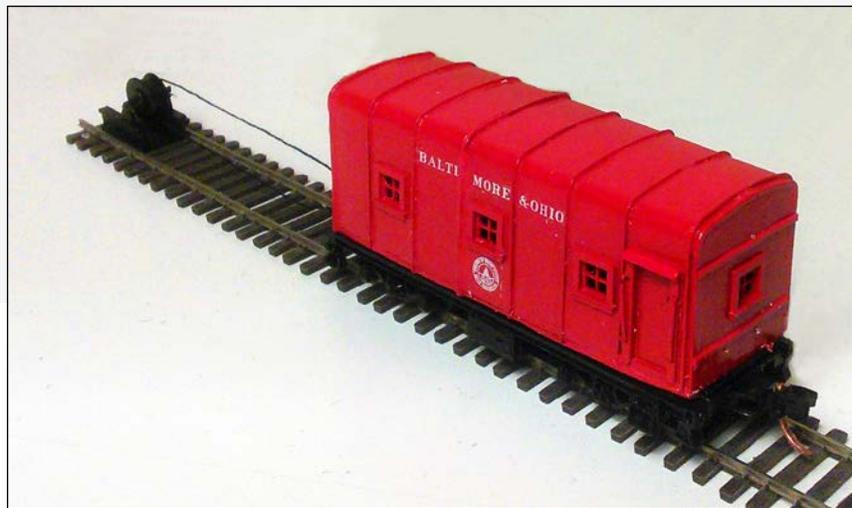
One final thought applicable to layout planning: since the Lidgerwood track would probably be generally vacant except doing wheel profiling, modeling it would seem to be an inefficient use of precious layout space. But since it could be near the layout edge and in locomotive terminal, making the Lidgerwood track your dedicated DCC programming track would seem to make sense.

Last but not least, if someone does decide to write the “definitive article” for *The Sentinel*, a few questions arose as I was assembling the pieces of this article kit:

1. How was the winch powered? Steam line from the locomotive, shop air, on-board internal combustion engine, shop electricity?
2. Are the metal cutting wheel profiling tools attached to just one pair of drivers at a time or to all of them for the same pass?
3. How many passes would typically be needed or how many thousandths of an inch would be removed with each pass?
4. What is that thing that looks like a flanger blade underneath U-2?

Harry Meem said I should ask Ed Kirstatter for the answers to these questions. I did but Ed replied in so many words that “he wasn’t THAT old.”

Following are two photos of Dennis Elliott’s N-scale model of the Newark Lidgerwood car. Looks like a cousin to Bob Chapman’s N-0 wagontop hopper car, and you probably would think Dennis was smoking something except for the photo on the following page.





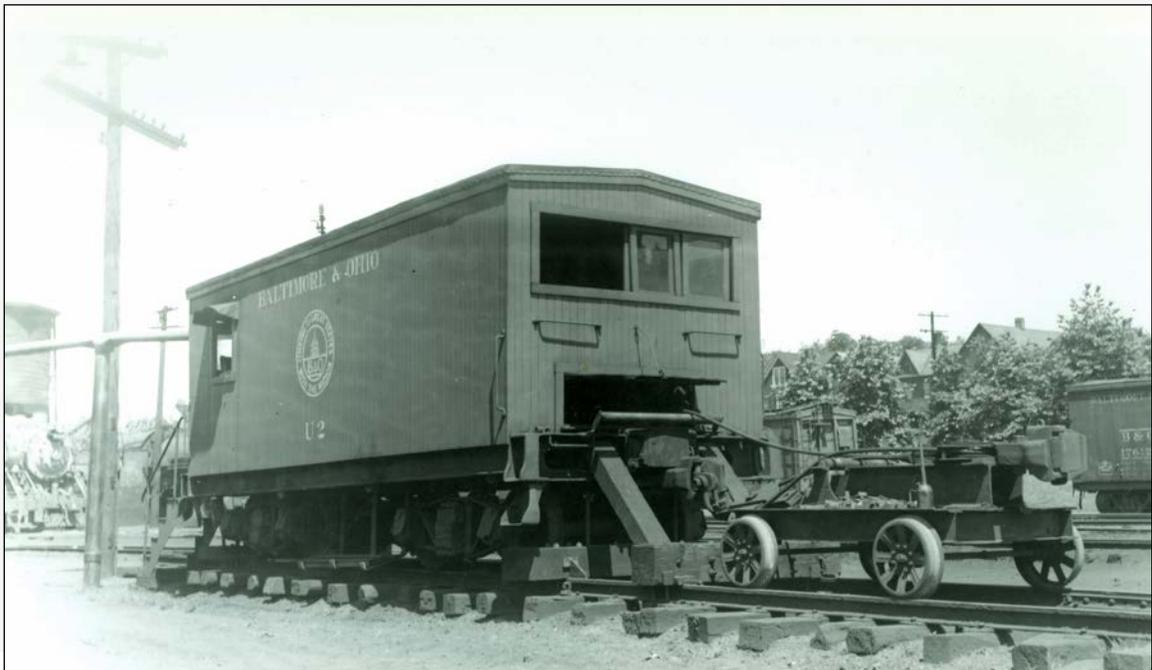
The Lidgerwood car at Newark, OH, Donald Kaiser photo, 1/16/55. Steam locomotive tenders seem to have been the preferred source of Lidgerwood underframes.



The Fairmont car, number not legible. This doesn't look like it was built on a tender underframe, and it also does not look like the cable is doubled. 1955 photo from the B&ORRHS's J.W. Barnard collection.



These two photos of Lidgerwood U-2 taken at Brunswick, MD are from Ed Kirstatter of, which he says were taken in the 1940s. (I believe I saw these somewhere credited to L.W. Rice, 1946 or 1950.) Note the “haulage dolly” (my invented nomenclature) with the pulley mounted on board it in order to double the cable. I believe this doubles the mechanical advantage compared with a single cable run and reduces wear on the cable.



B&O STEAM LOCOMOTIVE MODELS FOR 1940-1956

By GREG SMITH

CLASS	WHEEL	ROAD NUMBERS	YEAR BUILT	RETIRED	MODEL BUILDER	MODEL BUILT DATE	COMMENTS
A-2	4-4-2	1456-1475	1903	1947	Custom Brass	1982	See Note A.
B-8	4-6-0	1352-1399	1891	1942	Aristo Craft	1960's	Die cast model.
B-18	4-6-0	2000-2034	1901	1954	AHM Brass	1959-61	Good drive. Needs updated motor and details.
B-18	4-6-0	"	"	"	Sunset	1980	May need new gearbox.
C-16	0-4-0T	96 -99	1912	1951	AHM	1960-70's	Use deluxe version.
C-16	0-4-0T	"	"	"	Intl	1950's	
C-16	0-4-0T	"	"	"	M.B. Austin	1950's	
C-16	0-4-0T	"	"	"	GEM	1973	
C-16	0-4-0T	"	"	"	United/PFM	1962-65	
C-16a	0-4-0	96,99	"	1945	AHM	1960-70's	Deluxe version.
C-16a	0-4-0	"	"	1945	M.B. Austin	1950's	
C-16a	0-4-0	"	"	1945	Intl	1950's	
C-16a	0-4-0	"	"	"	GEM	1972	
D-30	0-6-0	Note 1	1919	1954	AHM	1970's	Use deluxe version.
D-30	0-6-0	"	"	"	Akane	1962	Good basic model. Needs details updated.
D-30	0-6-0	"	"	"	NWSL	1970's	Nice model.
D-30	0-6-0	"	"	"	P2K/PROTO	2000's	Comes with DCC/Sound
E-24	2-8-0	Note 2	1902-04	1955	Lambert	1974	For DCC change motor.
E-24	2-8-0	"	"	"	Sunset	1980's	Needs details updated.
E-27	2-8-0	Note 3	1905-10	1955	United/PFM	1965-75	Six different runs.
E-?	2-8-0				BLI		Project model.
E-60	2-8-0	3103-3145	1907-08	1956	Sundancer	1988	Ex Buffalo & Susquehanna. Sweet little engine.
J	4-4-4	1	1934	1949	Custom Brass	1977	Lady Baltimore. Sent to the Alton RR.
L-1	0-8-0	1000-01	1923	1954	Sunset	1980's	Needs details updated.
L-1a	0-8-0	1002-85	1923-29	1959	Sunset		Change valve gear to Baker from Walschaert.
L-2	0-8-0	Note 4	1925-31	1959	United/PFM	1965-75	Five different runs.
N-1	4-4-4-4	5600	1937	1950	Westside	1979-83	George Emerson. In storage for almost 10 years.
P-1c	4-6-2	Note 5	1924-25	1954	Rebuild		Take an Overland Models or Oriental model and change sandbox to round.
P-1d	4-6-2	Note 6		1956	Overland	1977	Shorts with lead truck and underside of pilot.
P-1d	4-6-2	"		"	Oriental	1984	Wrong smokebox front.
P-5	4-6-2	Note 7	1919	1956	United/PFM	1962-66	USRA Light Pacific. Nine kept Baker valve gear to their end.
P-5	4-6-2	"	"	"	Key	1979	Nice model.
P-5	4-6-2	"	"	"	BLI	2015	As delivered in 1919.
P-5	4-6-2	"	"	"	Athearn	1990's	Made as built and modified versions.
P-5	4-6-2	"	"	"	Mehano/IHC	1970-80's	As delivered in 1919.
P-6	4-6-2	Note 8	1922	1957			Project using USRA Light Pacific, Vanderbilt tender and Delta truck.
P-7	4-6-2	Note 9	1927	1957	Akane	1960's	As built version from 1927.
P-7	4-6-2	"	"	"	Key	1984	Various version 1927, mid 1930's, and post 1946.
P-7	4-6-2	5320	1945	1956	Mantua/Tyco	1960-80's	One of a kind tender.

CLASS	WHEEL	ROAD NUMBERS	YEAR BUILT	RETIRED	MODEL BUILDER	MODEL BUILT DATE	COMMENTS
P-7a	4-6-2	5304	1937	1939	MTS	1997	Royal Blue, Stripped and returned to P-7.
P-7c	4-6-2	Note 10	1946	1957	Key	1985	Post 1946 version with compressor on pilot, 4-wheel tender.
P-7d	4-6-2	5301-04	1946	1957	Key	1984-85, 1996	Cincinnati, 3 runs, four various details with drivers.
P-7e	4-6-2	Note 11	1947	1957	Key	1984	Post 1946 version with long tender. 2 various details.
P-8	4-6-2	5196-5199	1924	1951	Piermont Div.	1990-91	Originally an Overland model modified to B&O Pacific.
Q-1aa	2-8-2	4000-4139	1914, 41	1955	Oriental	1984	Wrong smokebox front.
Q-1c	2-8-2	4220-4329	1913	1955	Precision	1991	Nicely done.
Q-3	2-8-2	4500-4599	1919	1958	Mehano/IHC	1970-80's	Light USRA Mikado. Early model had plastic frames.
Q-3	2-8-2	"	"	"	Bachmann	2015	Modified version.
Q-3	2-8-2	"	"	"	Athemarn	1990's	Done as delivered and 1920-1930's modifications.
Q-3	2-8-2	"	"	"	MTH	2012	Mike's DCC/Sound.
Q-3	2-8-2	"	"	"	BOW/English	1970's	White metal kit.
Q-3	2-8-2	"	"	"	BLI	2015	Done as delivered.
Q-3	2-8-2	"	"	"	United/PFM	1961-66	Done as delivered.
Q-3	2-8-2	"	"	"	Westside	1977	Done as modified.
Q-3t	2-8-2	Note 12		1957			Project: USRA Light Mikado with EL-3 tender.
Q-4	2-8-2	4400-4444	1921	1959	Akane	1959-64	Good runner. Needs detail update.
Q-4	2-8-2	"	"	"	Precision	1991	Missing overfire jets on one side. See Note G.
Q-4b	2-8-2	4450-4499	1922	"	Westside	1976	See Note B.
Q-4b	2-8-2	4600-4634	"	"	Precision	1991	Missing overfire jets on one side. See Note G.
Q-4d	2-8-2	4635-4637	1941	1955	Westside	1978	See Notes C and G.
Q-7f	2-8-2	4830-4879	1916	1957	Precision	1991	
Q-10's	2-8-2	4700-4746	1912-17	1953	BLI/Others	2015	Project model starting with USRA Light Mikado. See Note H.
S-1	2-10-2	6100-6174	1923-24	1957	LMB	1962	Cab inaccurate.
S-1	2-10-2	6100-6174	1923-24	1959	Overland	1990	
S-1a	2-10-2	6175-6219	1926	1959	Westside	1977	Drive needs much work.
S-1a	2-10-2	"	"	"	Overland	1990	
S-1a	2-10-2	"	"	"	AHM	1960-70's	Undersize wheels and oversized flanges with poor drive.
T	4-8-2	5500, 5501	1925-26	1953			Project using AHM Parts. See Note D.
T-3	4-8-2	5555-5563	1942-43	1960	Westside		T-3 locomotive with S-1a tender. See Note E.
T-3b	4-8-2	5565-5584	1943-46	1960	Westside	1976	Some need new gearbox.
T-3t	4-8-2	Note 13		1960	Westside	1978	Long Vanderbilt tender.
T-4	4-8-2	5650-5659	1935-37	1957	Key	1987	Bought second hand from B&M.
T-4a	4-8-2	5660-62	1939	1957	Key	1987	Boxpox main driver.
U	0-10-0	950, 951	1926-27	1953	Westside	1977	Only two used as hump engines. Built from class S parts.
V-2	4-6-4	2(5340)	1935	1950	Custom Brass	1978	Lord Baltimore.
EL-3	2-8-8-0	7115-7144	1917-18	1952	Overland	1998	Announced but never released.
EL-3a	2-8-8-0	Note 14	"	"	Overland	1998	Simple Engine, cylinders all the same, double stack
El-3a	2-8-8-0	"	"	"	Sunset	1952	Simple Engine, cylinders all the same, double stack
EL_5a	2-8-8-0	7145-7170	1919	1954	Overland	1998	Simple Engine, cylinders all the same, double stack

CLASS	WHEEL	ROAD NUMBERS	YEAR BUILT	RETIRED	MODEL BUILDER	MODEL BUILT DATE	COMMENTS
KB-1	2-6-6-4	7700-7704	1934	1953	Sunset	1982	Ex SAL. Baker valve gear, Elesco feedwater system.
KB-1a	2-6-6-4	7705-7709	1936	1953	Sunset	1982	Ex SAL. Walschaert valve gear and Worthington feedwater.
KK-4b	2-6-6-2	7510-7525	1918	1953	Key	1982	Ex BR&P.
EM-1	2-8-8-4	7600-7608	1944	1960	Akane	1959-63	Undersized, well built, needs upgrading.
EM-1	2-8-8-4	7600-7629	1944-45	1960	Westside	1979	Various version with different boiler details
EM-1	2-8-8-4	7600-7608	1944	1960	Key	1983	Two versions, great models.
EM-1	2-8-8-4	7620-7629	1945	1960	Key	1983	
EM-1	2-8-8-4	7600-7629	1945	1960	Challenger	1999	Two version, Cadillac model to date.
EM-1	2-8-8-4	7600-7629	1944-45	1960	Bachmann	2012	Two versions. Great value for price includes DCC/sound.
EM-1	2-8-8-4	7600-7629	1944-45	1960	Precision	1994	Three different versions.
S-1a	Tender				Westside	1976	
S-1	Tender				Overland	1990	4-wheel and 6-wheel versions.
Q-4b	Tender				Westside	1977	
Q-7f	Tender				Precision	1991	
El-3	Tender				Sunset	1982	
USRA	Tenders				Bachmann	Currently	
E-27	Tenders				PFM	1966-75	
L-2	Tender				PFM	1971-75	

Note 1: Original numbers were 350-389, renumbered to 1150-1189 in 1950.
Note 2: Numbered 1706-1753 and 2200-2349 some converted to L-1 and L-1a.
Note 3: Numbered 2501-2913 in various sub classes, a number were converted to L-2, L-2a, L2b, and L-2c.
Note 4: 600-714 renumbered to 1600-1697 in 1954 there were four subclasses.
Note 5: Numbered 5035-5094 and 5000-5009 most converted to P-1d. Remain P-1c 5037, 5039, 5042, 5045, 5047, 5090, 5001, 5002 and 5004-5009.
Note 6: Numbers 5035, 5036, 5038, 5040, 5041, 5043, 5044, 5046, 5048, 5049, 5091, 5092-94, 5000, 5003, 5052, 5053, 5056, 5058, 5059, 5061 5066, 5068, 5070, 5074, 5075, 5083-85 and 5087.
Note 7: Twenty-one of the P-5 to P-5a's by changing valve gear Walchaert from Baker. Remained at P-5 class 5205, 5207, 5209,5212, 5217, 5219, 5222, 5225 and 5226.
Note 8: Numbers 5230-5244 Changed from Baker to Walschaert valve gear in the 1030's to Class P-6a with Andrews tender trucks
Note 9: President Class Locomotives originally painted green and changed to blue starting in 1945
Note 10: Lagged to smokebox front, pumps on the pilot, rivet tender with four-wheel tender trucks. Numbers 5305, 5308, 5309 and 5318.
Note 11: P-7c that had a longer welded tender with six wheel tender trucks. Numbers 5312, 5314, 5315, 5316 and 5319.
Note 12: Numbers 4508 and 4526.
Note 13: T-3's with Long Vandy tender from EL-6's. Numbers 5560, 5562, 5569, 5570, 5579, 5582, 5583 and 5589.
Note 14: EL-3a numbers 7115, 7117, 7119, 7121, 7125, 7127, 7129,7131-35, 7137 and 7139-44
Note A: Tender with brass model was used in 1930's. Use MDC low side tender to do last A-2, number 1474.
Note B: 1st run had switcher pilot and 2 compound compressors. 2nd run had road pilot and single compound compressor.
Note C: Model represent one of a kind. By changing sandbox to B&O sandbox you can represent the other two locomotives. Save sandbox to do a P-1c.
Note D: Use boiler, cylinders, and tender, scratch drive and frame, drivers are 74", and Hodges trailing truck, remove rear set of sandboxes, pilot truck has 33" wheels with axle centers 7' 2".
Note E: Lost Vanderbilt tenders after World War II.
Note F: The tender from the Emerson (N-1) ended up on various S-1/S-1a's.
Note G: Precision made extra Q-class engine cabs but the flagman's seat is too wide.
Note H: Using USRA Light 2-8-2 Remove sand dome and replace with PSC 32511, change valve hanger to PSC 31532, change generator location and type to Cal-Scale # 234 or 335 according to locomotive photos, replace and relocate bell with Cal-Scale # 285, add doghouse to tender PSC 32358, add lubricator and link on fireman side PSC #3382 & 32542, add stoker engine under fireman side Cal-Scale #254, add to new cab roof hatches down the center of roof with Cal-Scale #381.

Optional: Change headlight to PSC #31642, change power reverse to Cal-Scale #330, change marker lights to Cal-Scale #312, any other details to enhance realism. Move compound compressor up to halfway through walkway. Some Q-10's had walkways over the compressor so follow photos. Other feature are a few had headlights raised to top of smokebox front and changed to Pyle National winged headlights PSC with visor # 31295/31299 or Cal-Scale #201 without visor PSC 31296/31300 or Cal-Scale #205. A hand full of Q-10's had B&O Plate on smokebox door after headlight was moved up. With these modifications you will have a good representation of a B&O Q-10.

COMING FUTURE ISSUES

We have material in hand for articles on the following subjects which we plan to publish in future issues. Meanwhile, if you have any material to contribute to these subjects, you are encouraged to contact the editors.

B-8 Baggage Car
M-15L Boxcar Kit Review
N-13 Model
One Man's Roster--Wagon Top Boxcars
Wagon Top Covered Hoppers
Wagon Top Caboose
Painting B&O Structures
Concrete Phone Booths
Bachman USRA 2-8-2 Review
Detailing the Bachman USRA 2-8-2 (Q-3)
Walthers E9A Review
Bruce Elliott's B&O Piedmont Division Layout