

THE B&O MODELER

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AN INVITATION TO JOIN THE B&O RAILROAD HISTORICAL SOCIETY

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

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

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

B&ORRHS

Attn: Membership

P. O. Box 1608

Sykesville, MD 21784-1608

COMPANY STORE

COMMENTARY BY JOHN TEICHMOELLER

The Society's Company Store contains an immensely rich amount of information in the form of reprinted company documents. However, this candy store may be overwhelming to those wanting to know more about the B&O. So I thought I would try to highlight some items that I feel should be at the top of your shopping list as a way of facilitating your journey through the on-line catalog. When you arrive at the Company Store on the Society's website, you will see that the material is organized by categories. We will start our journey in the *Maps* category.

Roadway Maps—What section of the railroad are you interested in? These bound collections of maps are not topographic, not schematic, not valuation maps but are....well, they're called the "Bernie Beavers maps" for the gentleman who compiled them. There is a whole story about their origin but I don't remember enough of the facts to credibly recite it, and it's not really relevant anyway. The real point is, I don't know of any other railroad historical society that has anything quite like this. Most of them were done in the 1980s, so some of the stuff from earlier years may not show, but they give you a good idea of the track arrangements and physical features (like bridges and grade crossings). This makes them useful for planning a model railroad, for railfanning, or for identifying photos, among other purposes. They are mostly organized by division. Sometimes portions of the map compilations are included in convention handout packages. I model the Old Main Line, for example, so the relevant issue for me is the following. The on-line catalog lists quite a few different volumes. There is also some overlap:

71002 B&O Roadway Map, Vol. 2, Baltimore Terminal incl. Locust Pt., Sparrows Pt. and Curtis Bay, 1989.

Let's now scroll to the *Equipment* category.

Summary of Equipment Starting in the early 1900s and ending in 1960, the railroad published an annual detailed roster of equipment. The original publications, which you can sometimes find at shows, were pocket size, like employee timetables. The Society has reprinted some but not all of the issues. There's another story about why not all the issues are offered, but we'll skip that one, too. If you are modeling a particular year, you certainly need your year or if not available you should be able to find one close to your year. By the way, marine equipment is included, broken down by port. There are other breakdowns like SIRT and B&OCT and steam loco detail.

74057 B&O 1957 Summary of Equipment—Annual Roster of All Locomotives, Freight Cars, Passenger Cars and MOW Cars.

Summary of Equipment Summaries Many years ago, member Richard Daniels spreadsheeted all the freight car and caboose info in the SOEs he had access to into a single volume. He must have had access to the collection of SOEs at the B&O Museum because he covers 1917 through 1960 with no gaps. If you are a freight car buff, this allows you to see the timeline of a class of cars you might be interested in. Does NOT cover locomotives, passenger cars, maintenance of way equipment or marine equipment.

74001 Freight Car Equipment (includes cabooses), 1917-1960; A summary of B&O Summary of Equipment Books issued during that time.

A final word of caution: check your credit card limit before scrolling through the Company Store catalog as you will probably find more items you need than you started searching for.

Next issue: diesel stuff and more roadway stuff. And readers are invited to send us your favorite "must-have" reprint publications from the Company Store.

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

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

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

2018

[RPM Valley Forge](#) – March 23-25, 2018 in Malvern, PA.

- [Photos from previous RPM Valley Forge events](#)

[Savannah Prototype Modeler's Meet](#) – April 13-14, 2018 in Savannah, GA.

[Central Ohio RPM](#) – April 26-28, 2018 in Marion, OH.

[B&O Historical Society Western Mini-Convention](#) – May 19, 2018 in Holland, OH.

[New England/Northeast RPM](#) – June 1-2, 2018 in Enfield, CT.

- [Photos from previous NERPM events](#)

[St. Louis Railroad Prototype Modeler's Meet](#) – July 20-21, 2018 in Collinsville, IL.

[B&O Historical Society Eastern Mini-Convention](#) – July 28, 2018 in Eldersburg, MD.

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

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

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

2019

[Prototype Rails 2019](#) – January 10-13, 2019 in Cocoa Beach, FL.

UPDATES AND ERRATA

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

Modeler No. 45, p. 5, Kadee 40' boxcar.

Not an error as such but a clarification—Bob Witt and Jim Mischke helped refresh my memory on the background of the prototype and model including my curiosity about whether this was the same car Kadee did for the Society some years ago:

These two Kadee B&O PS-1 model boxcars depict class M-67A, originally Ann Arbor, refurbished by and acquired through broker United States Railway Equipment Leasing during 1964. They are appropriate for B&O in revenue service between 1964-1974 and beyond that in Chessie era company service. Model B&O 468783 shows delivered appearance, model B&O 468753 has a later appearance without running boards, patched out data including trust lettering, short side ladder, and added modern car data box. The Society did a project some years ago. These recent models from Kadee are additional variations of the lettering. They are good for post-1960 modelers. The original PS-1s were built in the 1950s, but these cars only passed to the B&O in the 1960s.

The B&O did have “new built” PS-1s, but with an interior height of 10'-0". These were built from P-S "kits" in a program at the DuBois Shops in the late 1950s.

Modeler No. 45, page 8, Rapido dome car

Our readers quickly reminded your editor that the B&O *did* have corrugated-side dome cars, Class S-25, *Moonlight Dome*, *Starlight Dome* and *Sunlight Dome*, 5 roomette, 3 drawing room, 1 bedroom. It's your model railroad and you could buy some of these nice Rapido dome cars for your imaginary B&O through sleeper service to Mt. Rushmore.

**THESE B & O TRAVEL BUREAUS
WILL HELP YOU PLAN YOUR VACATION**

FEEL free to visit, write, or telephone any of these Baltimore & Ohio offices for advice and information. The travel experts there will serve you without the slightest obligation on your part. If you desire, they'll make railroad and hotel reservations for you.

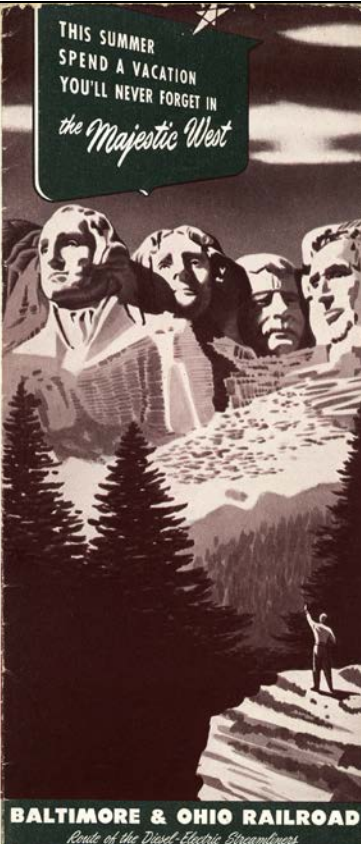
AKRON 8, OHIO 401 Metropolitan Bldg. Phone: Hamilton 8141	ELIZABETH 4, N. J. 272 N. Broad St. Phone: Elizabeth 2-6690
ANNAPOLIS, MD. 46 Maryland Avenue Phone: 2994	LOUISVILLE 2, KY. 114 Starko Arcade Phone: Jackson 8371
BALTIMORE 1, MD. B & O Building Phone: Lexington 6650	NEW HAVEN 10, CONN. 309-10 Washington Bldg. Phone: 8-3197/3-5198
BOSTON 8, MASS. 415 Old South Bldg. Phone: Liberty 1130	NEW YORK 17, N. Y. 122 E. 42nd Street Phone: Midway Hts. 3-4400
BROOKLYN 1, N. Y. Brooklyn Eagle Bldg. Phone: Main 5-4460	PHILADELPHIA 9, PA. Fidelity Phila. Trust Bldg. Phone: Pineapple 5-1969
CINCINNATI 2, OHIO 114 Erie Terminal Bldg. Phone: DUnion 2900	PITTSBURGH 18, PA. 482 Duane Trust Bldg. Phone: COver 6220
CLEVELAND 14, OHIO 1110 Chester Avenue Phone: CHerry 7074	ROCHESTER 4, N. Y. 155 W. Main Street Phone: Main 4780
COLUMBUS 15, OHIO 22 S. Third Street Phone: ADown 1736	TOLEDO 4, OHIO 624 Madison Avenue Phone: ADown 3118
CUMBERLAND, MD. B & O Station Phone: 3025, Branch 56	WASHINGTON 6, D. C. Connecticut Ave. S.H.S., N.W. Phone: Starling 8500
DAYTON 2, OHIO Van Cleve Hotel Phone: FUllon 7341	WHEELING, W. VA. B & O Station Phone: Wheeling 6060
DETROIT 26, MICH. Transportation Bldg. Phone: Cadillac 2533	WILMINGTON 7, DELA. 921 Market Street Phone: 6-6304

WOMEN'S TRAVEL BUREAUS. To simplify railroad travel for women, the B & O maintains special bureaus staffed by women. Look for them in Baltimore, Washington, and Chicago.

BALTIMORE & OHIO RAILROAD
Route of the Diesel-Electric Streamliners

P. O. 213-4-1-49

THIS SUMMER
SPEND A VACATION
YOU'LL NEVER FORGET IN
the Majestic West



BALTIMORE & OHIO RAILROAD
Route of the Diesel-Electric Streamliners

NEW PRODUCTS

BY CLARK CONE AND THE MODELER STAFF

New Product Notices and Disclaimer

We have left out some B&O-styled items from this issue where we felt they carried modeler's license too far. If we omitted something that should have been included or if our comments in parentheses are off base, let us know. As usual, there is only so much that can be said from product announcements in the enthusiast press and low resolution digital images on manufacturers websites, so if you purchase any of these products and feel motivated to write a review, you're most welcome. And, of course, "a model is a representation of reality." So don't let our critical comments stop you from buying something you "like the looks of but the ends aren't right." At a recent NMRA convention, Hal Miller, editor of *Model Railroader*, said he is reinstating their old slogan, "Model Railroading is Fun." JT

HO-Scale

Alco S2 switcher



Atlas Model Railroad Company

#9044 DCC Gold Item # 10002448

#9058 DCC Gold Item # 10002449

#9075 DCC Gold Item # 10002450

<https://shop.atlasrr.com/p-47205-ho-s2-gold-baltimore-ohio-9044.aspx>

#9044 Item # 10002429

#9058 Item # 10002430

#9075 Item # 10002431

<https://shop.atlasrr.com/p-47163-ho-s2-silver-baltimore-ohio-9044.aspx>



#9031 DCC Gold Item # 10002451

<http://shop.atlasrr.com/p-47208-ho-s2-gold-staten-island-9031.aspx>

#9031 Item # 100024332

<http://shop.atlasrr.com/p-47166-ho-s2-silver-staten-island-9031.aspx>

USRA 2-8-2 Light Mikado - B&O #4503



Broadway Limited

For the first time in the Paragon3 series, BLI is bringing out the USRA Light and Heavy 2-8-2 designs, commonly called Heavy Mikados and Light Mikados. The HO scale ready-to-run model will be equipped with Paragon3 sound and control system for DC and DCC. Synchronized puffing smoke will be available only on the heavy version of the Mikado locomotive. For complete details contact a dealer or visit.

For additional information see [Broadway Limited](http://www.broadwaylimited.com).

Pullman-Standard 60' PS-1 Boxcar



Intermountain

Intermountain has announced another run of B&O 60' PS1 boxcars. Reservations are due by April 30, 2018. Note this run includes 3 previously released numbers and 3 new numbers. These cars are B&O Class B-86. The brake date is NEW 11-68.

#46923-01 Car # 489890 Re-release
#46923-04 Car # 489894 Re-release
#46923-05 Car # 489895 Re-release
#46923-07 Car # 489889 New number
#46923-08 Car # 489892 New number
#46923-09 Car # 489897 New number

For additional information see [Intermountain 60' PS-1 Boxcar](#).

N-Scale

GP30 Phase 1



Atlas Model Railroad Company

#6944 Gold Item # 40003778
#6969 Gold Item # 40003779
#6972 Gold Item # 40003780
<https://shop.atlasrr.com/p-51833-n-gp30-ph1-gold-baltimore-ohio-6944.aspx>

#6944 Silver Item # 40003759
#6969 Silver Item # 40003760
#6972 Silver Item # 40003761
<https://shop.atlasrr.com/p-51815-n-gp30-ph1-silver-baltimore-ohio-6969.aspx>

GP9 Torpedo Boat



Atlas Model Railroad Company

#6600 Gold Item # 40002968
#6604 Gold Item # 40002969
#6607 Gold Item # 40002969

Features:

- NCE Decoder (DCC models only)
- Powered low friction drive
- Blackened metal wheels
- Dual brass flywheels
- Directional lighting
- Golden-white LEDs
- AccuMate® couplers

For additional information see [Atlas N-scale GP9](#).

VO-1000



Atlas Model Railroad Company

Item # 40000539

Features:

- Now Available in a DCC equipped version
- Directional lighting
- Step guards and exhaust stacks as appropriate per railroad
- Blackened metal wheels
- Factory-equipped with AccuMate® knuckle couplers
- Slower speed motor for closer to scale speeds

For additional information see [Atlas VO-1000](#).

GP9 Body



Atlas Model Railroad Company

Item # NGP9BO

For additional information see [Atlas Model Railroad Company](#).

Class N-44 Offset-Side Hopper

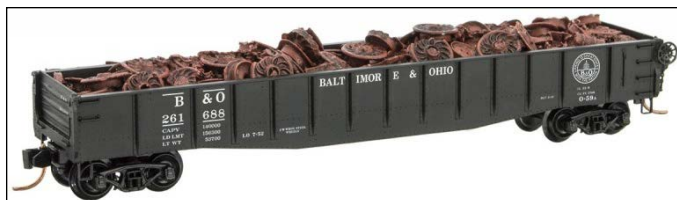


Bluford Shops

- #66021 single car \$18.79 (\$24.95 list)
- #66022 two-pack \$37.49 (\$49.90 list)
- #66023 three-pack \$56.19 (\$74.85 list)

For additional information see [Bluford Shops N-44](#).

Class O-59A Drop-End Gondolas



Micro-Trains Line

B&O O-59A drop-end gondolas in 4-car Runner Pack (w/ 2 different types of scrap loads). Note: this class of drop-end gondolas with the "13 Great States" markings has never before been offered before in ANY scale. Micro-Trains previous offering of these cars in B&O was in their as-built paint scheme from 1937. These cars were built in 2/41 and re-painted into this scheme in Lorain Ohio in 7/52. Retail Price: \$89.95 (M.B. Klein price: \$67.39) per set.

For additional information see [Micro-Trains B&O O-59A](#).

Class HC-30 Covered Hopper



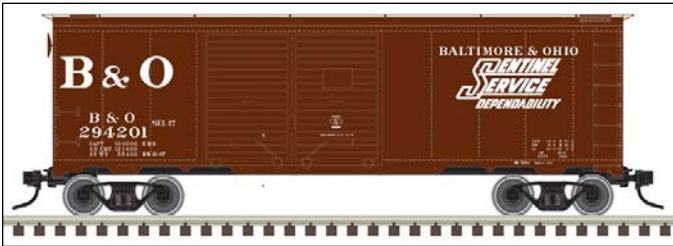
Micro-Trains Line

This 3-bay high-side covered hopper is grey with black lettering and runs on Barber Roller Bearing trucks. Built in 1970 by Pullman Standard, this 4427 cu. ft. capacity covered hopper used large shock absorbers to help dampen harmonic roll, reducing derailment risks.

For additional information see [Micro-Trains B&O HC-30 Covered Hopper](#).

O-Scale

O Scale, 2 rail, 40' 1937 AAR Double-Door Boxcar



Atlas O-Scale

Atlas O has scheduled a 2018 third quarter release of a Master series, 40-foot 1937 AAR boxcar with double doors. Both 2-rail and 3-rail versions of the ready-to-run model will be available for the Baltimore & Ohio.

For additional information see [Atlas O-scale 1937 AAR Boxcar](#).

3-rail TMCC F3 "B" PHASE 1 #84X



Atlas O-Scale

Item# 30136019 features:

- Steam generator detail on either the A or B unit as appropriate by railroad
- Highly detailed body with railroad-specific details
- Available in "A" and "B" unit versions
- All metal grab irons
- Die-cast metal chassis and trucks
- New die-cast metal prototypical scale fuel tanks
- Twin flywheel-equipped motors
- Directional golden-white LED lighting
- Accurate painting and lettering

For additional information see [Atlas O-scale F3B](#)

NEW PRODUCTS SHORTY BLURBS AND SUPPLEMENT

BY JOHN TEICHMOELLER

Bluford Shops Delivers War Emergency Hoppers,” N-scale, per *Model Railroad News*, November 2017.

Broadway Limited announces plans for second run for HO E1 diesels *Model Railroad News*, November 2017. I wasn’t paying enough attention—missed the first one.

Good enuf?

And finally, Clark wouldn’t touch this but Ray Stern wanted some commentary: Bowser has announced a run of two-bay hoppers lettered for B&O N-23. Release is due in the fall of 2018. These cars started life as 6250+ BR&P so-called “1906 Common Design” style cars built between 1907 and 1914. See *The Sentinel*, 3rd Qtr. 2016.

Bowser will be using its PRR GLa shell for this car. There are unavoidable compromises. Some modelers may find these sacrilege (although the B&O did have a class that appears to have been identical to the GLa, N-15, acquired from Jamison Coal & Coke and off the roster by 1934). Other modelers may be willing to live with the compromises. They might find the “stand-in” model a refreshing change from all those USRA hoppers many modelers probably have too many of in their fleet. And definitely easier to add to the fleet than build the dozens of F&C N-12 resin kits they should have.

Here are some principal dimensional comparisons:

	N-23	GLa
Inside length	10’	10’ 5”
Truck center	21’ 9”	22’ 3”
Ht. above rail	10’	10’

(Keep in mind that 1 scale inch in HO is a little more than .010”, a common thickness of our workaday styrene material. So the Bowser car is going to be as squat as it should be but about half a scale foot longer than it should. Is actual ca. 1/16” too long?)

The end verticals on the Bowser car are different from the correct N-23’s but car ends in trains are less visible so many modelers can live with this. And the triangular gussets where the side sill meets the end stake are missing. The end sills have too much “droop” but could be quickly squared off with a knife or file. Other detail discrepancies would probably be visible on the production model, but that’s for a detailed review of the actual model. The Summary of Equipment shows these cars lingering for a long time, after probably at least 2 rebuilds. They diminished in quantity over the years with 9 still on the roster by the end of the SOEs in 1960. 1933: 5392; 1940:1897; 1945: 1845; 1950: 988; 1955: 120.

The lettering artwork shows the car in what the famous Barkan Hopper Lettering Chart

<https://borhs.org/Logos/CBarkan/BOHopperStenciling1940-60s.pdf> calls the “Late 1940-mid 1945 Wartime Kuhler” scheme. The Bowser artwork shows the car riding on AAR style and not PRR 2D-F8 trucks. Of course this tooling has all cast-on grabs. Bowser pad prints their cars in Montoursville. You should see that machine!



EXTRA SECTIONS FROM THE READERS

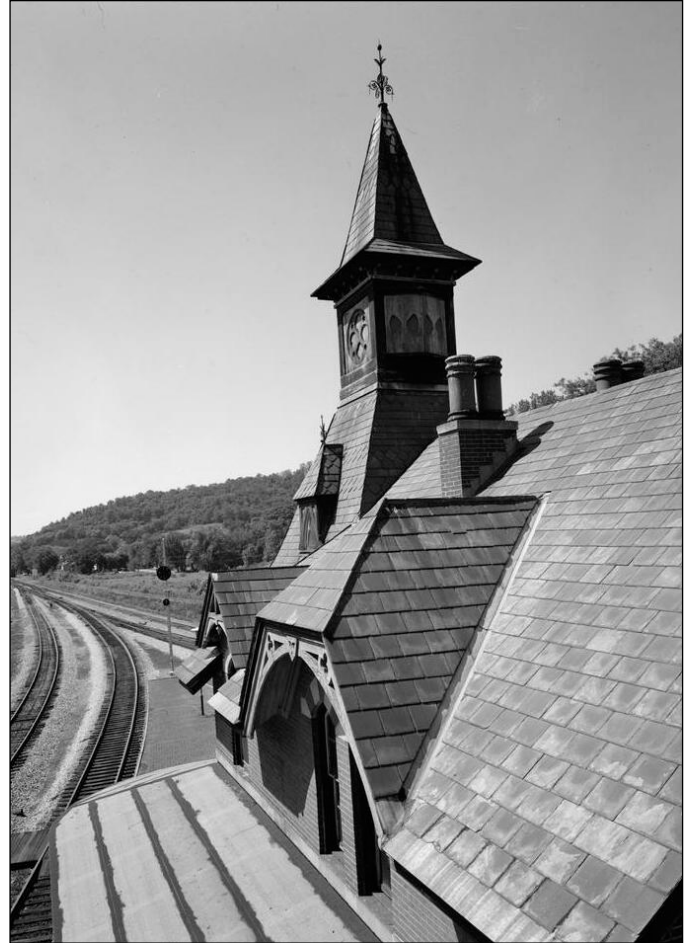
BY JOHN TEICHMOELLER

Section 1 Shingles or Not?

A number of modelers are working on the Model Tech Studios Point of Rocks HO station kit, so I'm sure Bruce Elliott's article in *Modeler No. 45*, in which he shared his approach to constructing the platform canopy, struck a responsive chord. I reckon there is an untold number of additional modelers whom we don't know about facing the same challenges. Then in January of 2018, Bruce Griffin came across the accompanying photo proving that at least at some point in history the canopy had a roofing paper covering instead of shingles. There were some e-mail exchanges attempting to date the photo based on color of the signals and other environmental observations. Then I remembered seeing that photo somewhere and went to the "passenger station" shelf in my library and put my mitts on *Waiting for the 5:05—Terminal Station and Depot in America*, by Clay Lancaster. Published in 1977, it's a small paperback offering a light treatment of the subject. I bought it from a used bookstore in my neighborhood in Baltimore in 1979 because it has a lot of historic images of stations that I thought might be useful someday, including a number of B&O stations. (Interestingly, despite the subtitle, notice that Point of Rocks is hardly a "terminal" station.) Anyway, it turns out the cover photo showing the tarpaper roof was by Historic American Engineering Record photographer Jack Boucher and taken in 1970. So we know at least that Model Tech Studios was correct, at least for a certain slice in time. For more information, we will have to borrow Marty McFly and Dr. Brown's DeLorean. For what it's worth, HAER recorded a lot of the B&O infrastructure. I think the catalog number for the Point of Rocks project is HAER MD-11, and it contains scale drawings of the station. Here is a link to the photo captions:

<http://www.loc.gov/pictures/item/md0852.photos.081827p/>.

One thing that will probably happen is that members of the Point of Rocks Station Model Brigade will be more observant of prototype photos of the station and accompanying dates. See, for example, page 71 in the *Morning Sun Trackside with Ed Griffith* book. Date not given but probably 1957. Looks like shingles to me.



Section 2 S-Scalers are Resourceful; They have to be!

HO scalers, or at least a small number of them, availed themselves of a kit of the O-48 class gondola. This was a special limited run commissioned by The Society in 2016, and it sold out.

Ed Kirstatter surprised me by sending photos of an "approximate" kitbash in S-scale, based on information in the Third Quarter 2016 *Sentinel* using an American Flyer flat car body. Ed says "Everything else was scratch built except trucks, couplers & KC brakes. The side post, corner post, retainer valve ratchet wheel & pawl were 3-D parts made for me by Shapeways 3-D printing. It's a long story. I also have brake wheels made that way, but I made the drop-handle type. The paint is Scalecoat II Oxide red." Ed's article about this project was published in the January/February 2018 issue of the National Association of S Gauge's magazine, *Dispatch*.



Section 3 What's on Your Workbench?

Ed Bommer sent me the above photo of a project he is working on with the following commentary:

Staten Island Rapid Transit No. 18 here is a rebuild from an O-scale Illinois Central Forney model from 1972. It is almost ready for paint. Yet to be added are firebox side extensions and rear cab wall. SIRT 18 was built by Baldwin in 1892. She was in service until 1906 and was not rebuilt with a Wooten firebox like the Cooke locos. SIRT 16-18 were the only Baldwin SIRT steam power, no doubt bought due to B&O influence.



Below was the finished product.



B&O MODELING IN THE ENTHUSIAST PRESS

BY JOHN TEICHMOELLER

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

“B&O Class M-15k Wagon Top Boxcar Conversion,” by Keith M. Kohlmann. *N Scale Railroading*, November/December 2017, pages 40-42. This is a slightly amplified version of the PDF “handout” that went with the N-scale “mini-kit” provided to N-scale registrants at the Chicagoland 2016 Railroad Prototype Modelers Meet. 7 color photos. Thanks to Dennis Elliott for sending a copy of the article. We were going to reproduce Keith’s PDF in *The Modeler* but learned that he had sold the article to the magazine, which is fine.

“B&O’s P-41 Lumberjack Flats,” by Mike Shylanski. *The Sentinel*, Fourth Quarter 2017, pages 20-27. Story of this pioneering freight car with 6 photos, clearance diagram and reproduction of a promotional brochure. If you want to scratch-build this car and need more than the diagram and photos provide, a general arrangement drawing is on file in the Society’s archives.

Railway Prototype Cyclopedia No. 34. This is the final issue in the series. Over the years the various volumes contained information relevant to B&O modelers. This last volume is a “mop-up,” containing additional photos and data and corrections supporting previous chapter articles. In particular you will find material on B&O. The “addenda” are arranged in volume order. So if you only have the previous volumes with B&O stuff, you will want this one too.

A nice comprehensive index to the entire run is available as a PDF download on the publisher’s website: these are the B&O related items I found in V.34 with the earlier volume noted. I may have missed some.

- BX express boxcars (V6 & 8)
- 10’ IH Postwar boxcar (8)
- B&O Wagon top boxcars (9)
- Weighing cars (12)
- ARA 1923-29 design boxcars (18)
- Flat car loading practices (20)

“Sunbursting with sound,” by Tony Cook. *Model Railroad News*, February 2018, pages 14-18. Review of Bachmann’s reissued (as the “DCC Sound Value on Board” series) iconic GP-30 HO diesel, lettered in the B&O Sunburst scheme. This is a typical thorough *MRN* review containing prototype information and including 3 prototype photos and 5 model photos. This model uses Bachmann’s original body tooling that features the incorrect-for-B&O lengthened fireman’s cab side which Cook points out. *MRN* used to typically include a mini decoder installation feature with their loco reviews. That is unnecessary here because the model already has a decoder. Instead Cook includes results of his research and communications with the SoundTraxx people into mobilizing the built-in decoder’s features. He finds no material flaws with the product and assesses it as it “provides another low-priced locomotive to consider.” If you want the correct cab, you’ll have to wait until Walther’s reissues its Life-Like tooling as a Proto series sound-and-decoder-equipped unit. One of my correct-body Life-Like units is sitting in the staging yard jammed up with a cracked axle gear, waiting my initiative to figure out the steps required to disassemble the trucks and replace the gears. (Somewhere I have an article or two showing how it’s done, and I stocked up with plenty of replacement axle gears from my hobby shop several years ago when my Life-Like diesels started that ominous clicking.)

“Brown 40’ Dry Van, Piggy Back Trailers,” article by Richard Yaremko and S-scale drawings by Patrick Lawson, *Railroad Model Craftsman*, December 2017, pages 64-66. Lead photo is a B&O trailer on board a Trailer Train flatcar. There is one of these on display at the B&O Museum in the front yard, but the photographable side is the north one and you need summer sun to get an unshady photo. See also page 128 top of the Morning Sun *Color Guide*.

“Silver Brown Trailers from Trainworx,” by Tony Cook and Richard Yaremko. *Model Railroad News*, February 2018, pages 68-72. We ran an announcement for this product in *Modeler 43* but I had not heard from anyone who obtained one and just ordered one myself and I gather they just hit the dealers’ shelves. The model is being done in a number of schemes and physical variations including B&O, two photos of which are included in the review. Trailers seem to me to have more variations than diesels, and it wouldn’t surprise me if there were minor differences between the model and the B&O prototypes. For example, the model may have a slight difference in the radius of the front corner curves. The review indicates the models, with their variations, track the information and graphics in the *RMC* article cited above. The model in the photos looks great to me. The “first run” is said to have been released and in the distribution chain, with a second run set for later in 2018. By coincidence in early 2018 I was looking for something in early 1971 *RMCs* and happened across Athearn ads for their version of this trailer. The ads didn’t show any B&O units. Based on photos in the ads, the Athearn model appeared to be pretty decent.

“Baltimore & Ohio Railroad Monongah Division,” by Dan Munson. *Railroad Model Craftsman*, December 2017, pages 40-47. Photo story about Bill Scheerer’s transition era layout in Kansas City, modeling “with license.” Traffic on Bill’s layout is controlled by a replica General Railway Signal CTC board and the layout features color position light signals. The layout will be open for the NMRA Convention in Kansas City this summer.

“Consider the Commuter—An RMC Project Layout,” by George Riley and Otto Vondrak. *Railroad Model Craftsman*, Part 1, January 2018, pages 42-49 and Part 2, February 2018, pages 58-66. OK, some readers may regard this citation as “stretching the B&O modeling relevance” a little, but here goes: *Model Railroader* for many years has been known for its detailed “project layouts.” Now *RMC* joins the fun. Part 1 of the series elaborates on the concept of modeling a commuter line with numerous prototype and model photos. There is a particularly appealing photo of Ken Miller’s rendition of the PATrain and Pittsburgh’s Grant St. Station on page 47. (Didn’t Dennis Fulton and the B&O Museum crew liberate some of the station’s hardware, with permission, just short of the wrecking ball?) Part 2 gets into the nitty gritty of the HO modular layout’s construction. The approach here is more broad brush than that typically taken by *Model Railroader*. But the B&O content is that the first set of modules, labeled White River Terminal, seems to be inspired by the downtown Buffalo terminal used by the BR&P/B&O and Lackawanna, which is understandable as Vondrak is from the Rochester area. Two nice photos of the Buffalo terminal appear on page 59 of the February issue. Part of this facility, along the river, is extant as the shops for Buffalo’s light rail system. It is only a few blocks away from our 2016 society convention hotel and perhaps some attendees had time to take the “free ride.” Talk about a signature look--the module they constructed incorporates one of those signature BR&P Ertl/Railway Design Associates concrete interlocking towers.

WALTHERS E9A REVIEW

EVALUATION BY LARRY ELLIOTT AND SCOTT SEDERS



In December 2015, Walther's released their model of the EMD E9A that powers their Baltimore and Ohio's Capital Limited. With the Capitol Limited and these E-units, Walther's was striving for a 1957 look. Which is nearly an as-built configuration for these 1955-built E9A, except for the four-digit road numbers and the lack of Stimsonite nose number panels.

Key Features

This release of the B&O E9A came with the announcement that Walther's was producing the Capitol Limited passenger trains. Walther's' advertisement lists the noteworthy details of the model:

- Limited Edition - One-Time Run of these Engine Numbers
- Based on Class DP-6 (E9A Units) featuring:
 - Raised B&O Capitol Dome Logo
 - Brass Nathan M5 Air Horn
 - Single Headlight with Flush "Glass" and Gasket Detail
 - Flush Number Boards
 - ATS Shoe on Engineer Side Truck
 - Stainless Steel Side Grilles
 - Full Fuel Tank Skirts
 - Improved Steam Generator Details

The locomotive was released with either DCC/sound or DCC ready as follows:

- 1454 A-unit and E8Bm 2415 B-unit
- 1455 A-unit and E8Bm 2417 B-unit
- 1456 A-unit only
- 1457 A-unit only



Note the coupler release rodding; Walther's supplied but modeler applied.

The Prototype



E9A 1455 at Baltimore, MD in 1960. D. Nyce photo. Jim Mischke collection.

EMD produced the E9 from April, 1954 until January 1964. The E8, which immediately preceded the E9, were built with 567B prime mover except for a few units at the end of the production run. Those final E8 units, like the E9, utilized 567C prime movers. Externally, the main difference between the E9A and the E8A is that the headlight glass fits more flush than the E8A. Keep in mind that in later years it was not uncommon to see E8A's fitted with E9A type headlights. As with all things B&O, not only working with photos but photos from the era you are modeling is a must.

In May 1955, EMD built what would be the B&O's final order of new passenger units. According to Jim Mischke's excellent *Baltimore and Ohio Railroad Diesel Roster Book*, the four EMD E9A units were originally numbered 34, 36, 38 and 40. They were renumbered to 1454-1457 in early 1957. All four units were sold to Amtrak in 1971-72. 1454-1456 became Amtrak 400-402. 1457 was assigned but never renumbered 403.

As the latest, best and most powerful B&O E-units, the E9A units were found on the Capitol Limited daily at the start, and very often thereafter, even up the start of Amtrak. They could be seen running in consists with any B&O unit assigned to passenger service. It was common to see E9A's double-headed in helper districts with freight unit helpers on the head end.

Paint and Lettering

The paint is smoothly applied and closely matches BANDO blue and gray. The striping closely matches Dulux Gold. The lettering is sharp and matches in-service photos and the B&O paint diagram.

Details

The model matches the "as delivered" grab iron and handrail configuration of the prototype. All detail parts are attached except for the front coupler cut lever. The modeler must attach it.

The cast capitol dome on the nose is represented by a raised surface. However, there is no relief on the capitol dome. Nose MU hoses were not included as the B&O did not begin to add them until the late 1950's.

The steam generator detail parts have been improved compared to previous E9A production runs.



Compare the photo of E9A 36 with that of E8A 92. The differences in the headlights can be clearly seen. Photos Terry Arbogast collection.



The model has a brass casting of a Nathan M5 airhorn.

An Automatic Train Stop (ATS) shoe is correctly located on the right front truck sideframe.

The lettering on the on the fuel tank skirting placards is well done. B&O began removing the fuel tank skirting and the fuel and water placards on the bottom rivet batten strip in the late-1950s. *[In my personal photo collection, I have photos of E9A units with the fuel tank skirting missing as early as March 1958. SS]*

DC Operation

This operational review has two parts as the model provided for this review was the sound equipped version. The decoder has the ability to automatically detect and operate on either standard DC or DCC systems.

The sample model is equipped with a Tsunami Dual Prime Mover 567's sound decoder. It weighs 1 lb. 4 oz. right out of the box.

The model was placed on the test track and the headlight and number boards lit up when the track voltage reached 5.5 volts but no sound. The voltage was slowly increased and at 10 volts, the sound came on. You could hear the two prime movers, one at a time, fire up and settle into idle mode. The model was not moving at this point, just sitting with the lights on and both prime movers operating in idle mode. At this point, it had a current draw of 0.08 amps.

The throttle was slowly increased and at 11.5 volts, the bell came on; the horn sounded 2 times to indicate it was about to move in the forward direction. As the speed increased the horn shut off but the bell continued to ring until the voltage was around 14 volts before it stopped. The engine ran smoothly and the prime mover notched up as the speed increased. At this point, the current draw had increased to 0.1 amps. This is an excellent current draw for a sound equipped model and certainly should not cause problems with the decoder due to excess current flow which could lead to thermal overload. Read this as excess heat which would automatically shut down the decoder.

The model was slowed down to a stop, throttle set to zero. When the voltage fell below 10 volts, the sound shut off. Carefully watching the volt meter, the model was slowed to the 10 volt setting, the model was completely stopped but still powered, so it could be reversed. The headlight turned off; number boards remained lit; the bell came on and the horn sounded 3 times to indicate it was about to move in the reverse direction. The bell remained on while it was running in reverse. The engine ran smoothly and the prime mover notched up as the speed increased. It was noted that the voltage and current draw remained the same as before.

Walthers indicates in their instructions that with the throttle set to zero the Tsunami will be silent, as it has no power. Increasing the throttle to around 5 volts or so will provide sufficient voltage to power up the decoder's internal circuitry. At this point, you will hear the prime mover start up and settle into a steady idle. The instructions further state that around 7.5 volts or so the model should begin to move. This sequence takes place as noted above but at a different voltage.

A potential problem was noticed when the model was stopped, again at the 10 volt setting to keep the sound on, the reverse switch was thrown to go forward. This resulted in the sound turning off but the headlight bulb came on and then the prime movers started up again. It then operated as noted before. It operated smoothly throughout the speed range with the same voltage and current draw as before.



It is important to note at this point, Walther's instructions clearly indicate the direction of travel can only be changed when the model is completely stopped. I understand this as setting the throttle to zero which turns off the lights and prime movers.

The various sounds that play while operating the model have been pre-programmed for automatic play back. The user needs to follow the instructions if he wants to change this automatic play back.

The instructions also clearly state when operating with an ordinary DC power pack, the model's operation will be a bit different than when operating a non-decoder equipped model. It is also mentioned, it is not recommended that the user use a pulse power pack as it will result in erratic operation. Walther's does recommend for analog mode, the user use a high quality electronically regulated power pack, preferably one that supplies smooth, filtered DC power. It further states when operating in analog mode, be careful not to exceed the decoder's input voltage rating of 27 volts. The Tsunami will shut off the sound and motor and flash the front and rear lights; the user should turn down the throttle immediately.

Operating a model equipped with a dual function decoder in the DC mode only, in my opinion, is not the best use of a well-designed and properly equipped model. The model runs too fast, most likely due to the high voltage needed to power the decoder and turn the motor, to be considered prototypically correct. If the user does not have a DCC system and has no desire to acquire a DCC system, they should consider purchasing the DC version of this model. While it would not have the sounds, it would operate as intended by the manufacturer with more prototypical results. The DC version does have an internal circuit board that allows the user to install an after-market non-sound decoder of their choice if they acquire a DCC system. The instructions that came with the model clearly show the user what needs to be done to install an after-market non-sound decoder. The above-described quirks of operating a "dual-mode" (DC/DCC) decoder are common and are not to be considered criticisms; you will typically see such things explained in most decoder-equipped loco reviews

DCC Operation

The test track was now connected to a Digitrax DCC system. The following results and comments would be the same regardless of the DCC system used by the modeler. While there may be some subtle differences between the many DCC systems available on the market, they are all compatible, decoder wise. A point to keep in mind, all DCC systems place a constant voltage on the tracks from 13.5 to 16 volts. It is AC and used to send the commands to a specific model's address. The decoder reads the commands and converts the voltage to DC for the motor.

The Tsunami Sound Decoder provided by the model manufacturer was supplied by Soundtraxx. It is an excellent decoder with numerous capabilities. The model as delivered has been set with default values for each of its various CV's (Configuration Values). These values can be changed or modified by the end user to meet the end user's personnel preferences.

Again, it is recommended the user follow the instructions that come with the model on how to obtain the detailed manuals for this decoder. They are PDF files available for download from the model manufacturer or from Soundtraxx. You would be looking for the User's Manual and the Diesel Technical Reference Manual. While not necessary, they are helpful as the user becomes more familiar with DCC and Decoders.

The model was placed on the powered track and the prime mover sound comes on. While listening closely, you will hear the 2 - 567 prime movers start up one right after the other and both settle into the normal idle mode. The model is not moving at this point and no lights were on.

Using the throttle, the default address of 3 was set. The user can change this as the decoder has the ability to support addresses from 1 to 9999. This makes it easy to set and use the engine number as the address.

The throttle was set to speed step 1. The model's sound went into notch 1 and started smoothly. It operated smoothly as the speed was increased, increasing up to notch 8. The notch rate increases every 7 speed steps, again the default. This is user adjustable. The voltage and current draw would be similar as noted for operating on DC.

The decoder provides 10 Functions to control various things. They are set for typical factory defaults used by the different model manufactures. The user can change them but it is strongly recommended the user be familiar with the many different non-sound and sound decoders available in the many models on the market or after market. They are all somewhat different on how to make these adjustments.

This model's 10 Functions are set to the following defaults:

Function 0 turns the headlight On/Off.

Function 1 turns the bell On/Off.

Function 2 turns the horn On/Off as long as the button is held.

Function 3 turns the horn On/Off for one short blast.

Function 4 turns the dynamic brake On/Off.

Function 5 varies with the model and in this model is not connected to anything.

Function 6 varies with the model and in this model turns the number boards On/Off.

Function 7 dims the headlight.

Function 8 turns all the sounds On/Off.

Function 9 turns brake squeal sound On/Off.

Function 10 turns coupler sound On/Off.

As noted above, these are user adjustable. If the end user has an older DCC system that only supports 8 or fewer Functions, the decoder can be programmed to support the Functions defined by the user. Again, the manuals are very helpful in how to make these adjustments. Many of the newer DCC systems released in the last several years support 12 Functions while recent systems support 28 Functions. A new DCC system is NOT required to operate this model.

This model's decoder has many capabilities and the defaults will most likely be satisfactory for many end users. The various sounds have the ability for their sound level to be adjusted. The master volume can also be adjusted. As delivered, the default sound levels are felt to be set too high for the average home layout but could be acceptable in a very large environment.

The decoder has a built in 7 band equalizer to adjust the various sound frequencies and better tune the resulting sound coming from the diesel. Again, this is the end user preference. It also has a reverb setting that can be set to user preferences if desired.

The decoder is equipped with four different horns and are user selectable, one at a time. Again, this is the end user's preference.

Summary

The model comes equipped with Proto MAX metal knuckle couplers. Their installation was checked using the Kadec coupler height gauge. It was noted on this sample model both front and rear couplers were mounted at the proper height and the glad hand on the front cleared the gauge. On the rear, it was noted the glad hand was a bit low and required adjustment. The couplers were moved left and right and found they returned to their proper center position. Adjustment to the glad hand is no big deal, as I have encountered this on many different models or new couplers just removed from their packaging. It should be standard practice to check them before placing a model in service.

The truck wheels were checked with the NMRA gauge and found that all wheels were in gauge. Again, this should be standard practice before placing a model in service.

This single unit diesel was placed on the writer's layout with 8 Walthers streamline passenger cars. This unit handled the consist smoothly and easily on level track as well as climbing a 2 percent grade which is 16ft in length. No increase in the throttle setting was needed to climb the grade.

Conclusions

This model's paint, lettering and details closely match that of the prototype. The quality of the paint and lettering is very good.

This model runs and operates far better in the DCC mode then it does in DC. In DCC, it has excellent operational abilities and provides far superior prototypical operation. The decoder default settings are acceptable and the end user has the opportunity to adjust the various settings to his preferences. It has excellent operational ability especially in the DCC mode.

This model is typical of the Walthers Proto 2000 line of excellent models. It is well assembled and equipped with an equally excellent decoder. After a proper break-in as outlined in the manufacturer's instructions will provide excellent service.

Larry Elliott died in September 2017. Before his passing, he was kind enough to provide an in-depth review of the running qualities and DCC aspects of this model. Anyone who knew Larry knew he was a DCC Whisperer. He assimilated a considerable amount of DCC knowledge. And, if he didn't know the answer, he doggedly conducted research until he found it. Larry is missed by many.

Scott Seders



Walthers has favored us by including the "brow" hand grab on the side of the hood that serves to hold the ladder in place used for washing the windshield. This is a tricky part if you have to add it to an already finished model.

M-15K ROCK AT CHICAGOLAND

BY BOB CHAPMAN



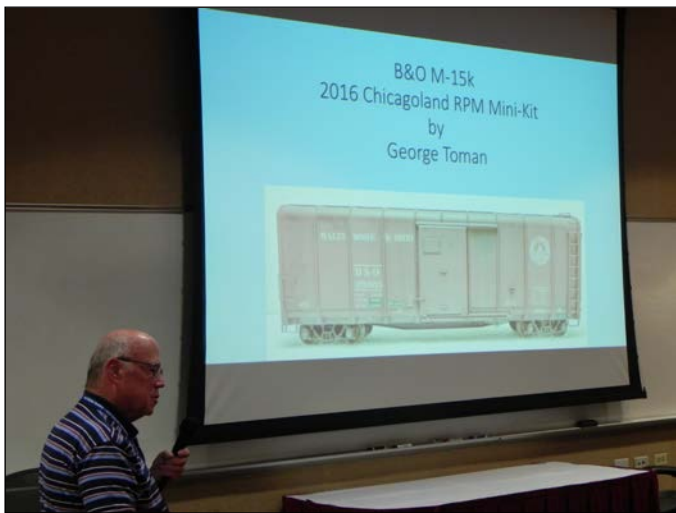
The Chicagoland RPM display room was a popular gathering place for registrants, with hundreds of display models, dozens of dealers, and three operating layouts. Photos by author.

A pleasant surprise greeted registrants for the October 2016 Chicagoland Railway Prototype Modelers Conference in Lisle, IL— an HO or N-scale MiniKit of B&O's class M-15k wagontop boxcar. A flurry of how-to-build articles soon followed (Dana Kawala in the September 2017 *Model Railroader*, my piece in *B&O Modeler No. 44*, George Toman in *Prototype Railroad Modeling, Volume 4* and Keith Kohlmann in the Nov./Dec. 2017 *N-Scale Railroading*), surely a Guinness world record for articles covering the same project within a period of a few weeks.

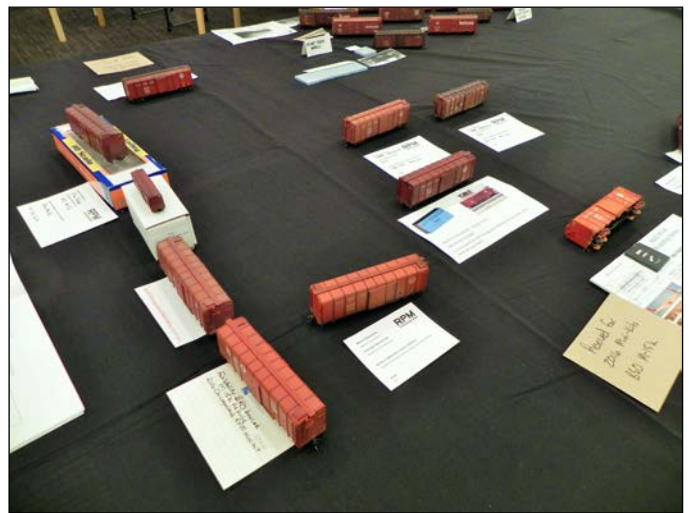
Registrants for the October 2017 RPM conference were encouraged to bring their completed models, and eleven modelers accepted up the offer. Ten of the “K’s” were herded into a special “M-15k Corral” display (probably a second Guinness record). Not content to stop there, the Chicagoland folks hosted an M-15k “how-to-build” clinic by prototype modeler George Toman; George’s work is exquisite, and his model is museum-quality.

Spotted among the 360 registrants were B&ORRHS members John Hodson and Rich Strebendt (my apology to members I may have missed). Other B&O models on display included a nice Westerfield M-15j, a scratchbuilt I-16 caboose, an M-53/M-53a wagontop boxcar set, and the infamous class N-0 wagontop hopper. A photo album of some of the displays follows. For those needing to top off their B&O model stash or book collection, a strong complement of dealers was there eager to lighten billfolds.

The Chicagoland RPM is among the country’s best; if you haven’t attended, consider treating yourself to a fun and informative weekend. [*The 2018 Conference is scheduled for October 18-20, 2018 at Lisle, IL. For additional information see www.rpmconference.com. JT*]



George Toman presented a clinic on how to build the M-15k MiniKit; his excellent model is museum-quality.



A special "M-15k Corral" was set up for those displaying their MiniKit handiwork. Where else can you see ten M-15k models in one place – surely a Guinness record!

M-15k MiniKit Completions, HO-Scale Except as Noted



Tom Baldner



Joe Binish



Bob Chapman



Robert Gretillat



Roger Hinman



Dana Kawala



Clark Probst



Mike Skibbe



Mike Skibbe (N-Scale)



Matt Smith

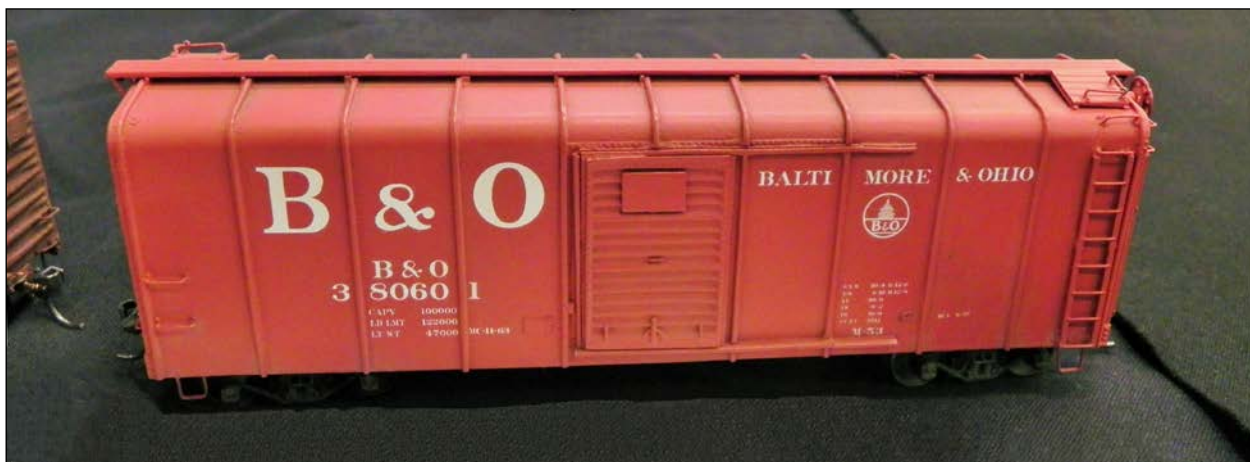


George Toman

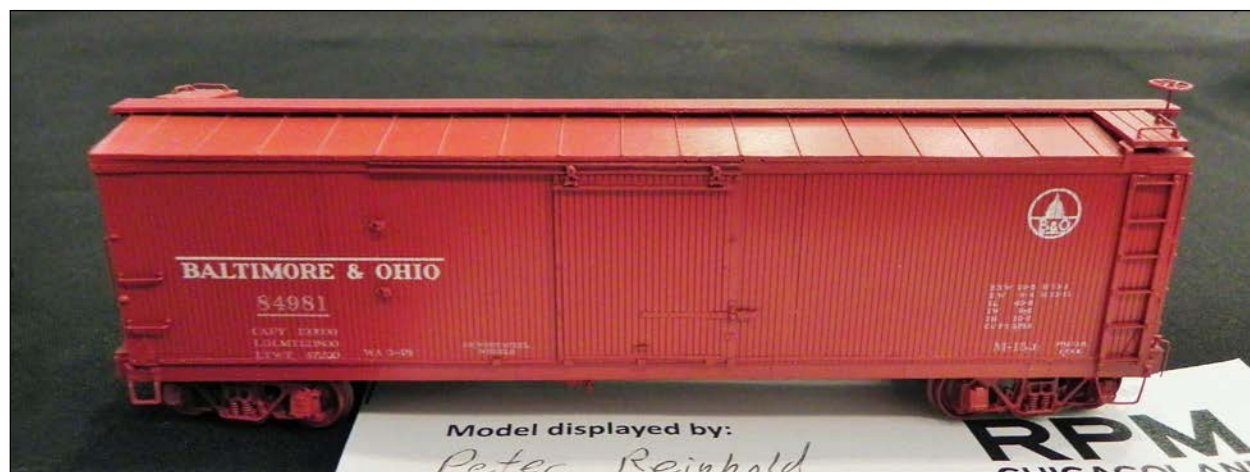
Other B&O Models, HO-Scale



Robert Gretillat, Funaro & Camerlengo Class M-53 Boxcar



Robert Gretillat, Wright-Trak Class M-53a Boxcar



Peter Reinhold, Westerfield Class M-15j Boxcar



Bob Chapman, Scratchbuilt Class I-16 Caboose



Bob Chapman, Sunshine Models Class M-55h Timesaver Boxcar



Bob Chapman, Kitbashed Class N-O
 [For more information on the N-O covered hopper see
 The B&O Modeler, Volume 7, Number 2 March/April 2011. JT ©]

M-15K END SILL

BY JOHN TEICHMOELLER

Modeler John Hodson did not attend Chicagoland 2016 (even though he lives nearby) so was on his own to obtain an unpainted Fox Valley M-53 kit. He couldn't find any in the "retail pipeline", but thanks to the silent auction at the Society's 2017 convention in Cumberland and help from Andy White, we were able to solve that problem. The original MiniKits included some special resin castings made by Frank Hodina. The most important of these was the "box" or "structural" end sill (my nomenclature, with apologies to those who know of a more correct technical designation). The casting itself is pretty simple, but its replication in styrene for those who didn't have the original MiniKit was not mentioned in Dana Kawala's *Model Railroader* article. I asked Bob Chapman, and he offered the following:

"I have no official prototype dimensions, but here's what the model has. It's a stepped design. The rear piece is 12" high, and the front 10". Total depth is 5", and length is 7'3". If I were to scratchbuild it, I'd use .015" x .125" for the rear piece and .040" x .100" for the front. Attached is a photo of the MiniKit."



Now, not to start any rumors, but....with all the interest in the M-15k (which was an important class in the B&O scheme of things), can a RTR HO car be far off from one of today's quality manufacturers?

John Teichmoeller

MODELING B&O's M-55H "ORANGE COMET" TIME-SAVER BOXCAR

By BOB CHAPMAN



B&O painted about a half dozen boxcars in the attractive "Orange Comet" Time-Saver scheme, usually in conjunction with an equipment exposition or publicity event. Although rare in reality, the car makes an eye-catching addition to any model

Author's Note – B&O prototype modeler Bill Hanley wrote a comprehensive article on building Sunshine Models' cast resin kit for the M-55C boxcar in the January/February 2008 B&O Modeler. In preparing this article, I drew heavily from the insights and techniques presented by Bill, while adding a few new ones either peculiar to the M-55H or as personal preferences. As the saying goes – "Give ten modelers the same cast resin kit, and they'll find eleven different ways to build it." Either way – thanks, Bill, for your trailblazing work.

What's not to like about B&O's blue and orange "Orange Comet" Time-Saver paint scheme! By any yardstick, it was one of the most unique and attractive schemes ever to ride the rails. Your editor, after qualifying himself as "knowing enough about boxcars to be dangerous," denotes this car as "the next most favorite B&O boxcar," second only to the blue and silver Sentinel Service car.



Soon after the late-1950 advent of the "Orange Comet" prototype, Varney's HO scale kit appeared in its 1951 catalog. Much of the carbody is wrong, but the paint scheme is beautiful!

Manufacturers offering HO-scale boxcars quickly took notice, and almost without exception added this colorful scheme to their product line – the earliest likely being a steel boxcar offering in Varney's 1951 catalog, produced when the paint was

hardly dry on the B&O prototype. I lusted for that model, but the \$3.00 price tag was way too steep for my youthful budget.

Never mind that none of these model carbodies correctly represented the complete set of attributes of B&O's class M-55H prototype – 7-foot Youngstown doors, 3-4 Improved Dreadnaught ends, a Murphy rectangular raised panel roof hosting a Morton “Open Grip” steel running board, a Duryea underframe, and the killer – an unusual 10'0” inside height, six inches lower than the typical post-1930s boxcar.



Ed Kirstatter has shared his Athearn metal bodied version of No. 467103.

Them were the days before the “prototype modeling” movement was born and the models looked good – very good! – and some of them matched at least some of the prototype features. Sunshine Models brought us the rest of the way, with an accurate prototype model kit for the B&O M-55H offered in three versions – Superior or Youngstown doors with standard freight lettering, and the blue-orange Time-Saver version. This article can be used to build any of them.

I hate to think how long Sunshine's kit has been resting in my unbuilt kit stash (along with many others!), waiting for some kind attention. I've heard that 75% of purchased cast resin kits never get built; if this kit is also sleeping in your stash, perhaps this article will give you hope.

The Prototype

As loads grew bulkier and carbodies grew stronger, the carbuilding industry migrated from the typical 8'7” inside-height 40'6” carbody of the 1920s-30s to the 10'0” IH 1937 AAR design – one of the most popular ever. By the early 40s, several roads were seeking a carbody even taller, and AAR's new 1941 10'6” design quickly became the carbody of choice for most roads.

Some roads, especially in the Midwest, continued to buy 10'0” boxcars through the 1940s and even into the 1950s, often due to tunnel and other clearance problems. Among them was B&O, whose M-60 class of 1951 was its first 10'6” boxcar purchase (except for some prior automobile car classes).

Primary among B&O's 10'0” inside-height boxcar classes was the M-55, ranging in subclasses from M-55 to M-55N (several of which were specialized rebuilds). The largest as-built subclasses were 1945's 500-car class M-55C and 1947's 1000-car class M-55H, differing from each other primarily in end style. The C's featured a unique proprietary 4-5 square-corrugated end, while the H's sported 3-4 Improved Dreadnaught ends.

According to B&O historian Jim Mischke, the first 100 M-55C's (#466000-466099) and a few others were shopped to improve running board clearance in some restrictive tunnels, enabling system-wide operation. Concurrently they were repainted into a special blue and silver “Sentinel” paint scheme, designed to promote B&O's new scheduled expedited freight service.

Following later was a much smaller number of the M-55H's repainted in the striking blue and orange "Orange Comet" Time-Saver scheme (six photographically confirmed – numbers #467071, -109, -226, -286, -434, and -439); it appears that these cars were repainted as needed beginning 8/50 to freshly represent B&O in publicity displays and equipment expositions promoting less-than-carload service. All the cars wore silver roofs except #467109, which was photographed sporting at different times a blue roof or a silver roof.



B&O M-55h 467439 Kansas City KS c. 1951 G. W Sisk photo.

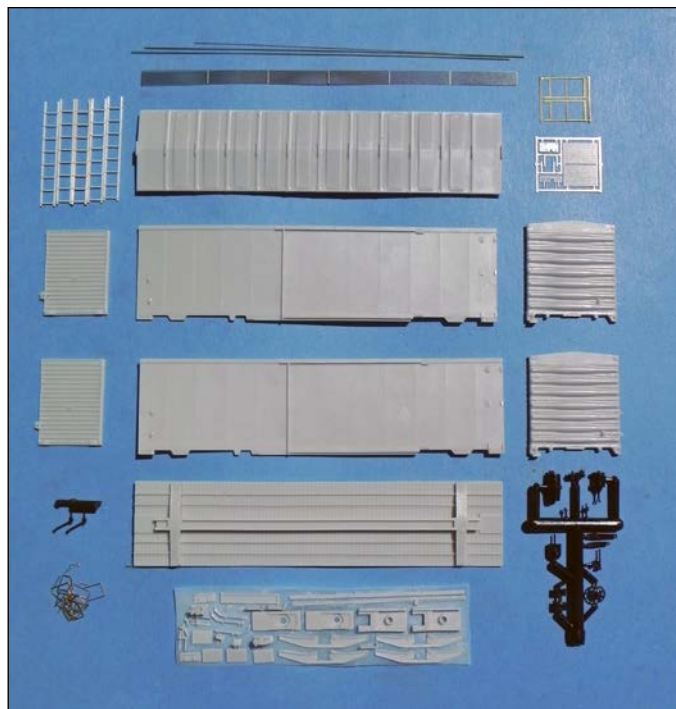
The Sunshine Kit

Sunshine Models' M-55 kits are typical of cast resin kits of that era – nicely executed prototype-model castings in a flat-kit format consisting of sides, ends, roof, and floor. Most detail parts needed to complete the car are provided, as are custom decals specific to the M-55 class; the modeler must provide trucks, couplers, and a few commodity items such as styrene strips and screws. Flash was minimal on the cast resin parts – thanks!

My greatest beef with the kit is the instruction sheet, unfortunately typical of many Sunshine offerings. The sheet covers a wide range of prototypes well beyond the B&O car, some with significantly different detail features, leading to potential confusion regarding "is this step related to my car". The instruction set presented here will focus solely on the B&O model. You'll probably be happy you waited so long to construct the kit.

A second instruction issue involves the M-55 underbody. The in-process model underbody photo shows an M-53 wagontop underbody, similar to the M-55 but different in detail such as the slack adjuster.

Beyond that, the gripes border on picky. With this model, Sunshine experimented with a different approach to modeling bracket grabs, molding somewhat oversized stanchions to the sides and ends with the intent of drilling through their sides to install a wire rung. The result is kludgy, and I quickly removed them in favor of aftermarket parts.



The Sunshine Models kit supplies most of the parts required to complete the model, including custom decals for the "Orange Comet" M-55H.

Bottom line – no kit is perfect, but Sunshine’s model is the best (and for the likely future the only) game in town for the M-55’s.

Build the Carbody

I hate masking! And avoid it wherever I can. Most of the “Orange Comets” had blue bodies with silver roofs (the blue-roof exception is #467109). With this in mind, I built the carbody with roof and underbody separate, to be added as a final step after painting. Those modeling the standard “B&O Red” M-55 can add the roof while building the carbody.

Remove flash from the sides, ends, roof, and floor, then wash them along with the small parts sheet using an oil-free detergent such as Ivory Liquid to remove any residual mold release compounds.

Since we’ll add the roof much later in assembly, we need to make sure that the sides are properly spaced to accommodate it later, and also to add some strength to the carbody in the interim. To achieve this, I used a .060” styrene sheet spacer plug added to the inside of each end, whose width matches the width of the roof plug (9’0” on my model); height of the spacer is not important (8’0” on my model). Glue the spacers perfectly centered between the sides of the ends; tack the spacer first with a small amount of contact cement to allow perfect positioning, then secure the spacer with a bead of CA along the top and bottom.

Glue the sides to the ends, aligning the tops; as the glue is drying, test fit the roof to assure perfect alignment.

Test fit the floor inside the carbody. In my model, the floor was a bit wide, which I corrected by removing equal amounts from each side of the floor. Sanding with fine sandpaper laid on a flat surface works well for this.

Detail the Underbody

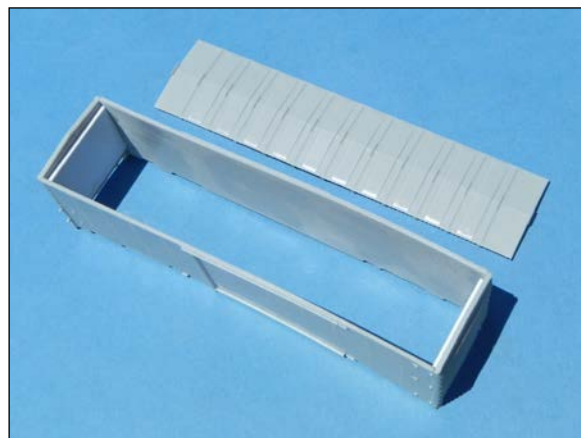
Drill (#50) and tap the bolsters for 2-56 screws. For good operation, be sure that the holes are centered on the carbody and perpendicular to the floor.

The extended draft gear boxes sport a Duryea plate (the part with a flange and two ridges) on their top. With a small dab of contact cement, tack the plate and position it centered with the flange at outer end of box; secure with CA.

Temporarily insert the floor at proper height into the carbody; with a file, deepen the notches at the rear of the coupler boxes to clear the centersill as needed, so that the Duryea plate will fit snugly against the carbody ends. Glue the upper half of the box to the coupler pad. Drill (#50) and tap for a 2-56 coupler box mounting screw, which will secure the lid. Make sure the lid does not interfere with the ability of the trucks to pivot.



Spacers the same width as the roof plug will facilitate final assembly after painting.



Assembled carbody sides and ends; we’ll add the roof and floor after painting.



The “Duryea plate” rests atop the draft gear box, flange pointed outward.

Remove the floor. Install couplers (I used Kadee scale-sized #158's) and AAR double-truss "Bettendorf" trucks (I used Tahoe Model Works #107). Check coupler height and adjust as needed (my model was OK).

For some of the cast resin parts on the parts sheet, it works well to sand their backs with fine sandpaper on a flat surface before removing them; this will eliminate most of the flash, making remaining cleanup very simple.

In this fashion, remove the four underframe crossmembers. The two outboard crossmembers are positioned behind the tab extending downward in the sidesill; glue them with CA, flanges facing the end of the car.

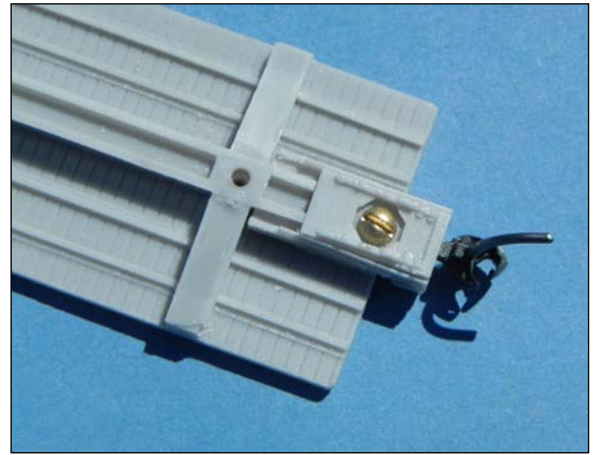
Remove the long Duryea angles from the parts sheet, and glue them to the two crossmembers just installed, flange facing the center and outer edge flush with the outer side of the centersill.

A rivet in the Duryea angles will identify the location of the two remaining crossmembers; glue these crossmembers, flanges facing the end of the car. Trim the ends of the four crossmembers flush with the edge of the floor.

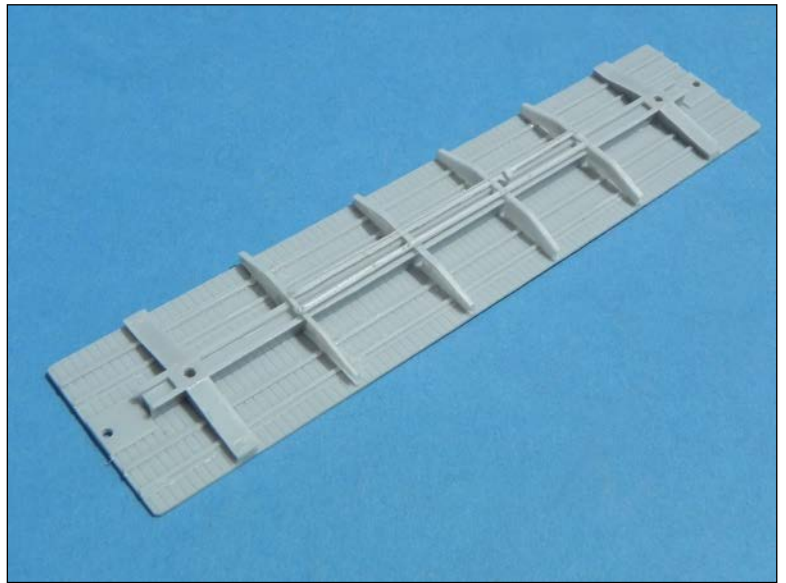
I followed Bill's approach for the Duryea "torsion bars". Cut them from .015" x .060" styrene strip, sized to fit between the bolster and the first crossmember. Glue them about 1' below the floor at the bolster and 6" below the floor at the crossmember. Cut centersill cover plates from .010" x .188" styrene strip, sized to fit between the bolster and first crossmember; leave some extra space at the bolster so that they will not interfere with the trucks' ability to pivot.

Using the photo as a guide, install the brake components. The long cast resin channel supports the brake cylinder, and should be trimmed to fit between the two center crossmembers. The L-shaped cast resin legs for the reservoir are too long, and need to be trimmed. I glued them to the ends of the reservoir, then added a strip of .020" x .125" between the legs for a more secure glue joint with the floor.

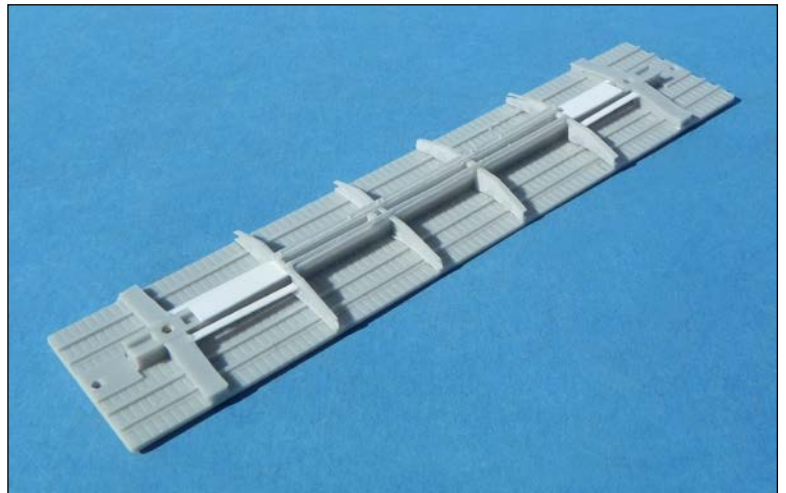
For my non-contest "layout models," I don't model items not visible in normal viewing, such as piping to the brake components. If you desire to do this, follow Sunshine's instruction photo, and don't forget the trainline piping.



Assembled draft gear box.



Glue the Duryea angles atop the crossmembers.



Install the Duryea "torsion bars" and centersill cover plates.

The M-53 underbody in Sunshine's instruction photo shows a slack adjuster. Neither Bill nor I have been able to spot this device in photos of the M-55H, so we have omitted it. (This was subsequently confirmed in Ed Kirkstatter and Chris Tilley's research on slack adjusters – see *B&O Modeler* #44.)

Complete the Roof

Snip the photoetched running board and its related components from its parts sheet. Using small amounts of contact cement, tack the running board to its supports on the roof, and position it so that it is perfectly centered. Once in position, secure the running board to the supports with small amounts of CA.

Glue the lateral walks to the photoetched brass frames, with the brass legs extending from their outer edge. Bend the legs downward to join to the side of the roof. Glue the flat brass lateral walk extension to the bottom of the running board with CA. Glue the legs to the side of the roof.

Drill (#78) for the corner grabs, and glue them. Rather than the oversized eyebolt, I used a stub of .015" wire for the corner support.

Bend the photoetched running board end supports, legs angled downward and bottom stubs perpendicular to the running board. Glue them to the bottom of the running board, flush with the end; we'll glue the angled legs after the roof is installed onto the carbody.

Detail the Carbody

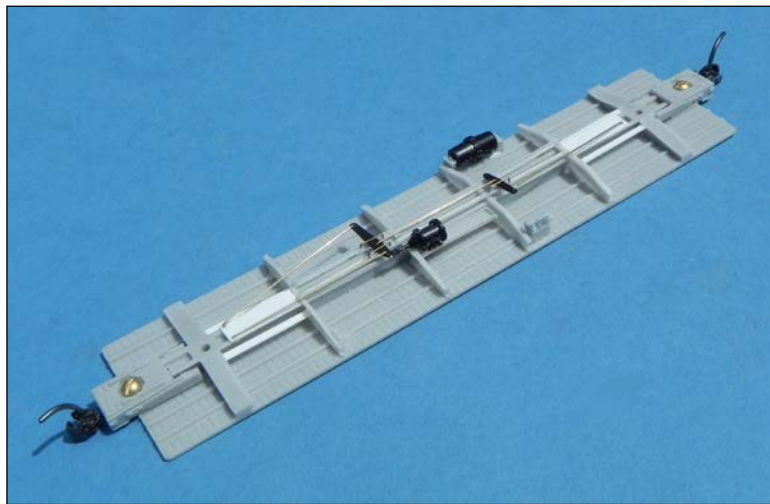
Cutting and shaving with a razor blade, notch the left door stop to clear the door latch. Glue the doors to the carbody.

Drill (#74) the bottom edge of the carbody at each corner for the stirrups; a map pin is handy for making a dimple where the hole is to be drilled. Glue the stirrups.

Using the photos as a guide, trim two rungs from the ladders, and round the tops of the stiles. Level the ladder mounting pads on the carbody sides with a few passes of a flat file. Glue the side ladders to the pads; the bottom rung should be slightly above the top of the sidesill notches. Glue the end ladders with the rungs matching the side ladders.

As mentioned previously, I removed Sunshine's molded mounts for the bracket grabs, and installed aftermarket bracket grabs from InterMountain (available via special order); bracket grabs from other sources will also work. The IM rung is molded a bit heavy; I replaced it with a short section of .012" wire. Tip – if modeling the "Orange Comet" scheme, leave off the upper bracket grab until after decaling.

Using the photos as a guide, glue the large tackboards to the doors and ends. Tip – if modeling the "Orange Comet" scheme, leave off the large tackboards until after decaling. The small routing tackboards found on the doors were not included in the kit; cut them from .020" x .100" x 1/8" styrene strip and install them.



Completed underbody detail.



Running boards, lateral walks, and end supports complete the roof detailing.

Detail the Ends

Drill (#78) for two 18" straight grabs at the bottom of each end; shorten their legs so that they will not interfere with later floor installation. Install a bracket grab at the right of each end.

On the "B" (handbrake) end, glue the retainer valve next to the ladder above the top corrugation. Drill (#78) a hole at the bottom of the retainer valve to accommodate a right-angle bend in the .012" wire retainer line. Bend the retainer line with jogs at the third and fifth corrugations from the top, and secure it with CA.

The bottom of the Ajax handbrake housing rests on the top corrugation; cut a scrap of .040" styrene strip to shim the top of the housing, and glue the housing. In the bottom edge of the end directly below the center of the Ajax housing, drill a hole for the bell crank, and install it. Drill (#78) below the end of the Ajax housing chain, bend a right angle in the .015" wire brake rod, and CA it in the hole. Trim the bottom flush with the bottom of the bell crank and glue it to the side of the crank.

Install the Morton brake platform in holes (#74) drilled into the second corrugation. Support the platform with angles cut from .010" x .020" x 18" styrene strip. I substituted a Kadee #2030 brake wheel for the one provided.

Drill (#78) the tab at the lower left of the end for the uncoupling lever eyebolts, and install them. Bend .015 wire to the shape of the uncoupling lever (or use the aftermarket part from Detail Associates). We'll install the uncoupling levers after gluing the floor to the carbody.



Completed carbody, left side.



Completed "B" end.



Completed carbody, right side.



Completed "A" end.

Painting and Lettering

Did I say I hate masking? Here's where our construction sequence will pay off. The blue carbody, silver roof, and grimy underbody can all be painted separately. The orange stripe is a decal. No masking tape in sight. Hooray.

Matching prototype colors is always an iffy proposition, often boiling down to the visual perception and preferences of the one doing the matching. It would make sense that B&O would use its passenger car blue for the carbody, but I deviated. B&O's passenger blue is a cool blue, selected to blend with the accompanying gray. I went with a warmer blue, C&O Enchantment Blue, to better coordinate with the "Orange Comet". I had the C&O color in my surviving Floquil stash; at this writing, a few other paint manufacturers also offer C&O Enchantment Blue.

The "Comet Orange" is a close cousin to Floquil Reefer Orange, which I tinted a bit to lighten it; other paint brands also offer a Reefer Orange shade which may be similar. As an alternative, check out Chessie System Vermillion; it looks like a possible match. Sunshine provides decals for the orange stripe, so you'll likely only need the orange for touchup.

The decal set is amazing, with sheets covering three different lettering colors – orange, blue, and white. The orange stripe sheet is a bit of a hodgepodge. Full length stripes are provided for the "Comet" to the left and right of the door. The rest of the orange stripes are basically scraps, not designed for any particular application on the carbody; you'll need to combine them to do the door, or paint the door stripe with your orange paint mix.

Using the prototype photos as a guide, apply the stripes, heralds, and lettering. Note that the large Time-Saver Service herald is comprised of seven components that must be applied in a specific order:

1. Orange comet stripe
2. White ring
3. Orange ball
4. White kidney
5. Blue-lettered circle
6. Blue "B&O"
7. Orange "Time-Saver"

Paint the large tackboards and upper bracket grabs orange and install them. Paint the roof silver (or blue if you like the #467109 blue-roof variation). Assemble the carbody.

Given the display-car nature of the prototype, I went with minimal weathering on my model, concentrating it on the trucks and underbody.

We're done! Your model will accurately represent a special and colorful B&O prototype, whether as a publicity display piece, or in everyday revenue service.

References

B&O Color Guide to Freight and Passenger Equipment, Craig T. Bossler, Morning Sun Books, Inc., 1996.

"10'0" Inside Height Postwar 40'6" AAR Box Cars," Ed Hawkins, *Railway Prototype Cyclopedia*, Vol. 8, RPCyc Publishing Co., 2003.

The Postwar Freight Car Fleet, Larry Kline and Ted Culotta, National Model Railroad Association, 2006.

Photographs of B&O Timesaver Boxcars

Car Number	Location	View	Date	Roof Color	Slide, Photo or Published
467071	Unknown	Right side, B-end.	MC 7-53	Silver	<i>Freight Car Models</i> , vol. II, R. Schleicher. <i>Rail Model Journal</i> , pg. 78, G. Sisk photo.
467071	Kansas City, KS	Right side, B-end.	MC 7-53	Silver	<i>The Sentinel</i> , vol. 11, #4, pg. 10, G. Sisk photo.
467109	Mt. Clare, MD	Left side, A-end.	MC 8-50	Silver	<i>Freight Cars Rolling</i> , pg. 24, L. Sagle.
467109	Mt. Clare, MD	Left side, A-end.	8-1950	Silver	<i>The Sentinel</i> , vol. 11 #4, pg. 13.
467109	York, PA	Right side, B-end.	MC 8-51	Blue	<i>B&O Color Guide to Freight and Passenger Equipment</i> , pg. 79, C. Bossler.
467109	Mt. Clare, MD	Right side, B-end.	MC 8-50	Silver	<i>B&O Magazine</i> , Sept. 1953, pg.4.
467226	Winnipeg, MAN.		1953		Dave Shaw collection.
467286	Mt. Clare, MD	Right side, A-end.	9-19-1955	Silver	<i>The Sentinel</i> , vol. 11, #4, pg. 12.
467434	Attleboro, MA	Left side, A-end.	MC 9-55	Silver	<i>B&O Color Guide to Freight and Passenger Equipment</i> , pg. 79, C. Bossler.
467439	Kansas City, MO	Right side, B-end.	MC 7-57	Silver	<i>The Sentinel</i> , vol. 11, #4, pg. 10.

Table courtesy of Ed Kirstatter



Few boxcars can compare with B&O's "Orange Comet" Time-Saver scheme!

A ROUNDHOUSE QUEEN, THE B&O E-39 ENGINES

A MODELING STORY

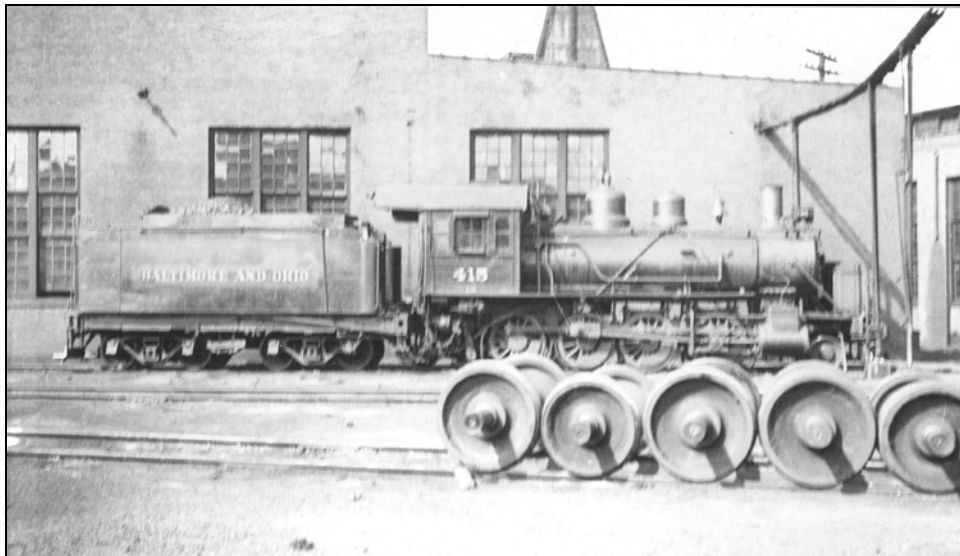
By EDWIN C. KIRSTATTER
PHOTOS BY AUTHOR EXCEPT WHERE NOTED



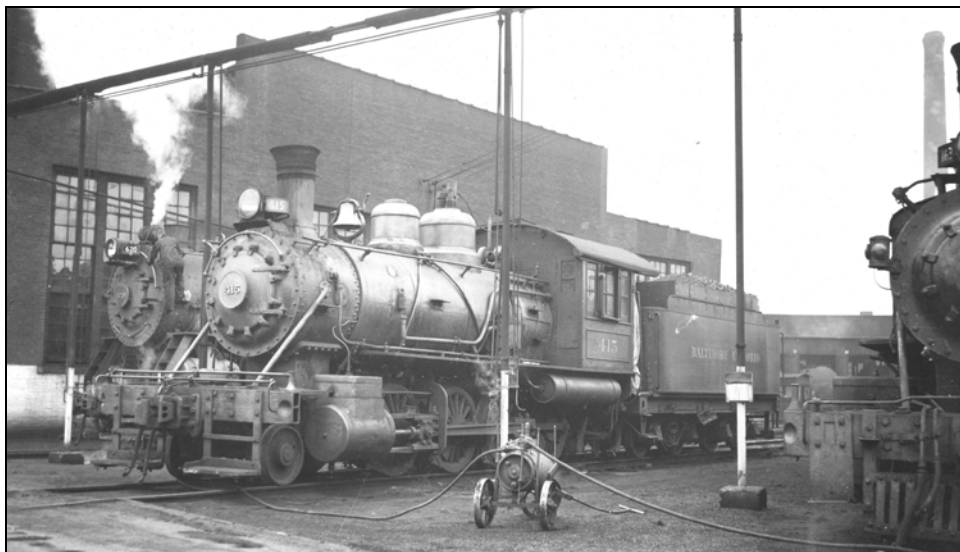
The M&K Railroad and a 1903 2-8-0

The Morgantown & Kingwood Railroad was purchased in 1920 by the B&O. Thirteen locomotives came with it, all built by the Baldwin Locomotive Works. The M&K now became a 48-mile branch of the B&O in West Virginia from Rowlesburg (M&K Junction) to Morgantown passing through Kingwood. There were many coal mines on this line. The M&K connected with B&O lines at both ends.

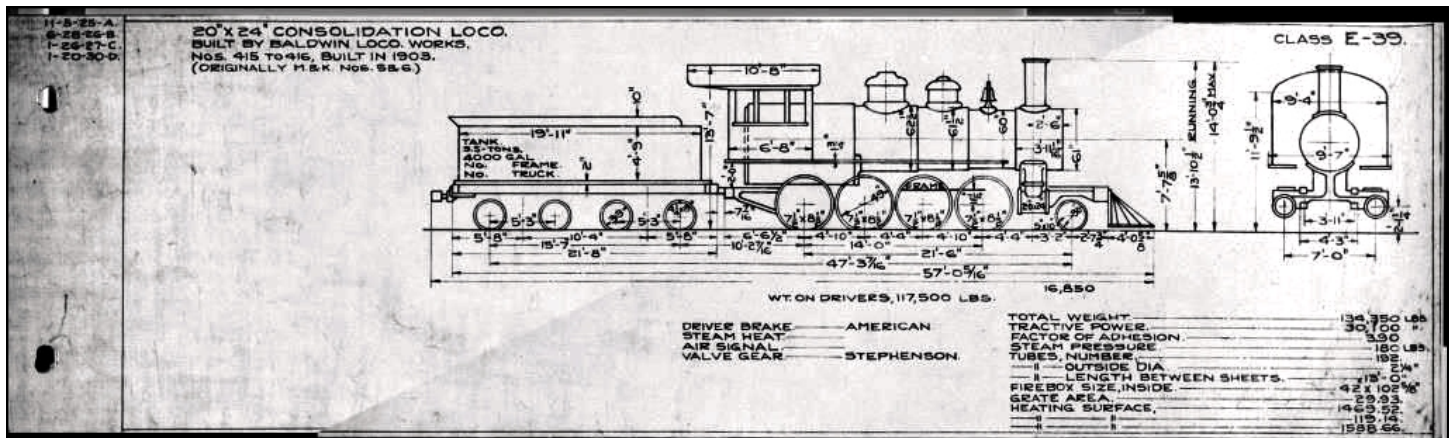
One of these thirteen engines was M&K Number 5, a Consolidation type. It was renumbered to B&O 415 and classed E-39 and was moved to other parts on the railroad when supplanted by heavier power. It was renumbered to 589 in 1943 before being scrapped in 1946. Some photographs have turned up of 415 at Cumberland, Maryland in 1938 and 1940 sitting outside beside the roundhouse, reproduced here. They are right and left side views of the same locomotive in close to the same time frame, something that it is not always possible to have. A Queen she looked like! This engine was built in 1903 with 20"x 24" cylinders and 'D' slide valves, 49" (later changed to 50" with new tires), Stephenson valve gear between the frames, weighing 134,350 lbs., with a tractive power of 30,100 lbs. reduced to 20,380 lbs. The engine had a factor of adhesion of 3.90 with a working steam pressure of 180 lbs. and no superheater.



B&O 415 Class E-39 Right Side at Cumberland, Maryland 1938, Max Miller collection.



No. 415 left side at Cumberland, Maryland, October, 1940. Harold K. Vollrath collection.



Some Model Possibilities

When I first saw the Aristo-Craft imported model many years ago from New-One Model Co. of Tokyo, Japan a die-cast HO model of a NYNH&H 2-8-0, I thought this might have possibilities for conversion to the B&O E-39. It was an inexpensive model. I found out later it didn't run very well with its open frame motor and its naked gearing. But I compared it to the photographs I had and dimensions on the B&O diagram and found it "close enough" to go ahead with this kit-bash. With many detail parts added, it could be made to look like the #415 in the photographs.



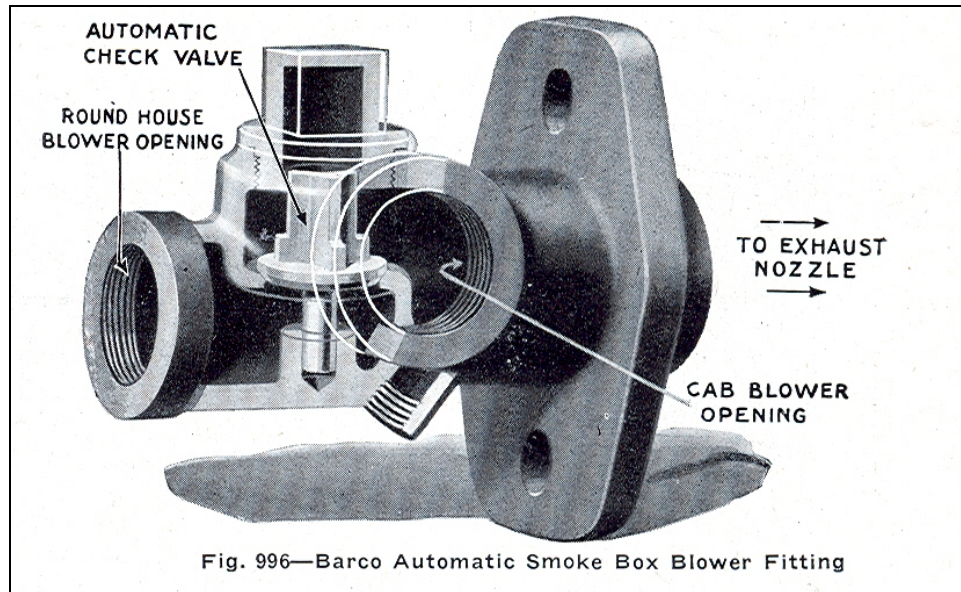
A portion of Polk's Aristo Craft ad from page 9 of the January 1962 *Model Railroader*.

To start this re-detailing I removed all brass turned parts, the air pump, air tanks, the domes, generator, headlight and stack and the cast on piping. These were replaced by finer cast brass details by Cal-Scale, Kemtron and others, drilled for wire pipes. A rule of thumb to go by when re-detailing steam locomotive models is: "If the real engine would not operate without it, Put It On". The following is a description of the parts I added or changed. A list with part numbers is included at the end of this article.

Boiler

The stack was reused with a four-bolt plate under it, a scratch built part. A long screw goes through these and the boiler and cylinders to the frame to hold the front end together. Sometimes the engine had a spark arrestor on its stack. I added a 9 1/2' long brass 16" diameter air reservoir tank under the left side of cab, with a drain valve, piped to a new cast brass air pump on same side. Pop valves and a whistle were added to top of the new steam dome with the whistle's operating rod to the cab. A little-known part was added on top of the boiler between the steam dome and the generator in front of the cab: a Globe valve from Cal-Scale to be used with a standards gauge while they were re-setting the safety valves. A Kemtron brass movable bell replaced the crude one furnished with this model at the same location. Lifting injectors were placed in front of the cab on the boiler sides and piped to check valves forward below the bell. BLW builder plates were cemented on sides of the smokebox and I added braces to the pilot deck from there. A Barco round-house blower connection was made from a Kemtron part to go on the left smokebox side (between the builder's plate and the diagonal brace) to help kindle a new fire. The pilot was removed and replaced by a scratch built one from brass with brakemen footboards. An uncoupling lever was put on top of the beam with a hand rail and flag posts and deck aprons behind this. A brass smokebox front of 69" diameter, not of a B&O Standard 12 lug type, was cemented on after filing down the old one, with a number plate on it and a hand rail at top below the headlight which sits on the smokebox top with a new bracket bent for it from brass.

All sand pipes, blower pipe, air pump exhaust and handrails were added with Cary electrical junction boxes on right handrail for conduits to go to the generator, the headlight and marker lights. You need two handrail stanchions at these locations. Small pipes came out from under the boiler jacket lagging to go to the air operated bell and lube lines to top of the cylinders valves from a hydro-static lubricator in the cab on top of the boiler's firebox, but this appliance was not modeled.





Cab

The cab got the most reworking to convert the model's all wood cab to a metal one. A new roof overlay was made to raise the roof, and vent hatches were added to it. The cab sides were milled down with a file to place new brass overlay sides. These were cutout for the correct three windows needed. A panel below the windows was made for the engine number and class lettering. Windows were added to the front of the cab. One was left open on the engineer's side to show the green paint inside of the cab. Hand grabs were added at the back of the cab.



Running Gear

Although I did not get this model to run better at this time, I did replace the cylinders and Laird crossheads with Alligator type crossheads from Kemtron to fit the cylinders, guides and yoke, using die-cast parts from a Model Die Casting/Roundhouse 0-6-0. The cylinders' 'D' slide valves were reshaped with a file. Cylinder cocks were added with scratch built valve stems and rockers. Driver springs were also added to the frame above the number 1 & 2 drivers only. A brass electrical conducting draw bar was scratch built. An engineer was put in the cab from Dyna-Models with a Johnson bar in front of him. I like to populate my railroad! Finally one more part I like to add to my B&O steam models is the ash pan door's operating lever if I can see this well enough in the photographs I am using to work from. Magnification may be required to see it. On this engine it is found on the right side under the cab just behind the last driver with a brake cylinder and lever directly behind it. I built this from brass. They don't make chain small enough in HO to keep that retainer pin from getting lost, so I didn't model it.

Most parts were cemented on with epoxy cement where I couldn't solder or attach with screws or pins with their heads filed square. The front coupler is a Kadee #8 mounted in a brass pocket and an air brake hose beside it on left. No brake shoes were put on this model nor attempted. The only other brake parts used are under the cab on right side, the distributing valve with equalizing tank and brake cylinders and levers below. A firebox wrapper should be made from black plastic to cover the open frame motor all the way to back of the cab as these old straight boilered, narrow firebox engines were built.



Tender

I did not use the tender that came with this model but replaced with a better small brass one also from Aristo-Craft that came with a brass 0-6-0 model. A lot of detailing was done to it. The first step was to modify the coal boards to look like the photographs of 415—they were cut down and new ones added. Then a dummy coal load of balsa wood with real coal on it was fitted inside with a clinker fork on top. Drains were added at the back corners of the rear deck by drilling and filling with a short piece of small tubing placed in those holes and soldered to give depth to them. The front water legs had shut off valves for the outlets below soldered there on top. A backup light by Cal-Scale was put at the back deck on a bracket built for it with a conduit coming to it along the right side of the tank. A brass ladder was also put on back at the right. Rerailing frogs were placed on both sides of the frame at center. The underframe has an air brake system added with an air hose at the back end in the normal location. The rear foot boards were scratch built from brass with cut levers above and poling pockets. Vertical handholds were placed on all four corners of the tank with sill steps below them. A B&O drawing furnished the dimensions to make from brass wire a penstock hook and shows its location on the back of the coal board. A Kadee #5 coupler was used at rear of this tender in its plastic draft gear box. The trucks used were brass Andrews type for good electrical pick-up. The couplers height was checked with a Kadee gauge, and more weight was added inside of the tank to help. A Dyna-Models fireman with a shovel in his hands stands on the tender's front deck with a water keg nearby. This was a tender of 4,000 gallons of water capacity and 9 1/2 tons of coal originally.



Manufacturer	Part No.	Description
Cal-Scale (now Bowser)	245	Number Plate (1)
	257	Air Pump (1)
	265	Vertical Check Valves (2)
	304	Back-up Headlight (1)
	306	Westinghouse "U" Air brakes (1 set)
	314	Globe Valves (1)
Champion Decal Co.	EH6D	B&O Steam Locomotive set, Dulux Gold
Kadee	No. 5 & 8	Magna-Matic Couplers
Kemtron (now Precision Scale Co.)	TR-18	Headlight (1)
	X-217	Generator (1)
	X-240	Driver Springs (4)
	X-245	Air Valve (1)
	L-371	Bell (1)
	X-359	Lifting Injectors (1 pair)
	X-381	Air Hoses (2)
	X-1414	Blower connection (1) and Alligator crossheads to fit.
MDC (Roundhouse)		SP 0-6-0 Cylinders, Guides & Yoke
Precision Scale Co.	3028	Boiler Steps (5)
	3158	Whistle (1)
	3285	Reverse Lever (1)
	4854	Air Tank Drain (2)
	31053	16" Air Tank (1)
	31099	Loco Brake Cylinders & Levers (1 pair)
	31134	Pop Valves (2)
	31152	Roof Hatches (2)
	31231	Steam Dome (1)
	31232	Sand Dome (1)
	31429	Deck Braces (1 pair)
	31466	Sill Steps (2)
	31519	Water Valves (2)
Miscellaneous		Brass sheet
		Tubing
		Rods
		Wire & Bank Pins

References:

B&O Power; Steam, Diesel and Electric Power of the B&O 1829-1964 by Sagle and Stauffer, Published 1964, Page 72.

Steam Locomotives of the Baltimore & Ohio; An All Time Roster, by William D. Edson, Pub. 1992. Pages 88 & 161.

B&O Form 6; Officers, Agents, Stations, Sidings and Mileage of these Companies. 1922 to 1960.

B&O Mechanical Department Equipment Diagram for Class E-39 2-8-0s numbers 415 & 416.

B&O Locomotive-Tender Penstock Spout Hook drawing #72991 dated 10-17-19 revision C, and its location on tenders.

B&O Summaries of Equipment.

The Official Guide of the Railways of United States, Canada, Mexico and Cuba.

United States Safety Appliances for all classes of cars and locomotives. AAR Issue 1950.



ANDY HOLZOPFEL AND DYNAMOMETER CAR NO. 930

BY JOHN TEICHMOELLER

The First Quarter 2018 issue of *The Sentinel* carried Bruce Elliott's tribute to former Society member and skilled artist and modeler Andy Holzopfel who died in October, 2017. Bruce mentioned some of Andy's better known modeling projects. At the 2013 Greensburg, PA prototype modelers meet I had the opportunity to deploy my Micro-Mark "photo studio in a box" and photograph many B&O HO models from John Schletzer's collection. One such model was a scratch-built model of B&O dynamometer car No. 930, made by Andy and shown below. We have published other photos from that meet in our "One Man's Roster" features in *The Modeler*, and will probably have more, but I thought this was a timely opportunity to share the photos of 930. Yes, the model is a little dusty—I was not prepared for this exercise with a soft brush, and I was too busy with the quantity of models to even think to blow off the dust. Andy was definitely a character. I'll miss chatting with him at Dan Grone's table at Timonium.

John Teichmoeller
February 13, 2018

For those who want a little more, let me share the following which Ed Kirstatter sent me some years ago:

This car was built by the B&O in 1913. It is 50' 9" over the end sills of the steel underframe. Its body is wood construction that looks something like a combination passenger car. It rides on four-wheel trucks with drop equalizers. At the front is an oil force pump dynamometer and next the recording room with table and apparatus. In the rear section are three state rooms with a total of four berths along an aisle, then the kitchen. At the very back is the dining room.

The 1916 *Car Builders' Dictionary* has a picture of No. 930 on page 261 as figure 200. Also on page 271 is figure 241 which is the floor plan for this car.

Some other photos I have found:

- An 8x10 B&W purchased from the Society's Company Store at a convention, an almost broadside view taken at Camden Station, 6/12/1937.
- An 8x10 B&W from Bob Lorenz, ES-30, at Chicago in 1934 behind a Vanderbilt tender with a passenger train following.
- An 8x10 B&W from Bob Lorenz, D-76, at Auburn Jct., IN behind two F-M Trainmaster demonstrator diesels on 9/31/1953.

[I also recall a color shot of the car in a train in one of the Bill Price color books but I can't locate it at present. JT]

Edwin Kirstatter
10/25/2012



Right Side



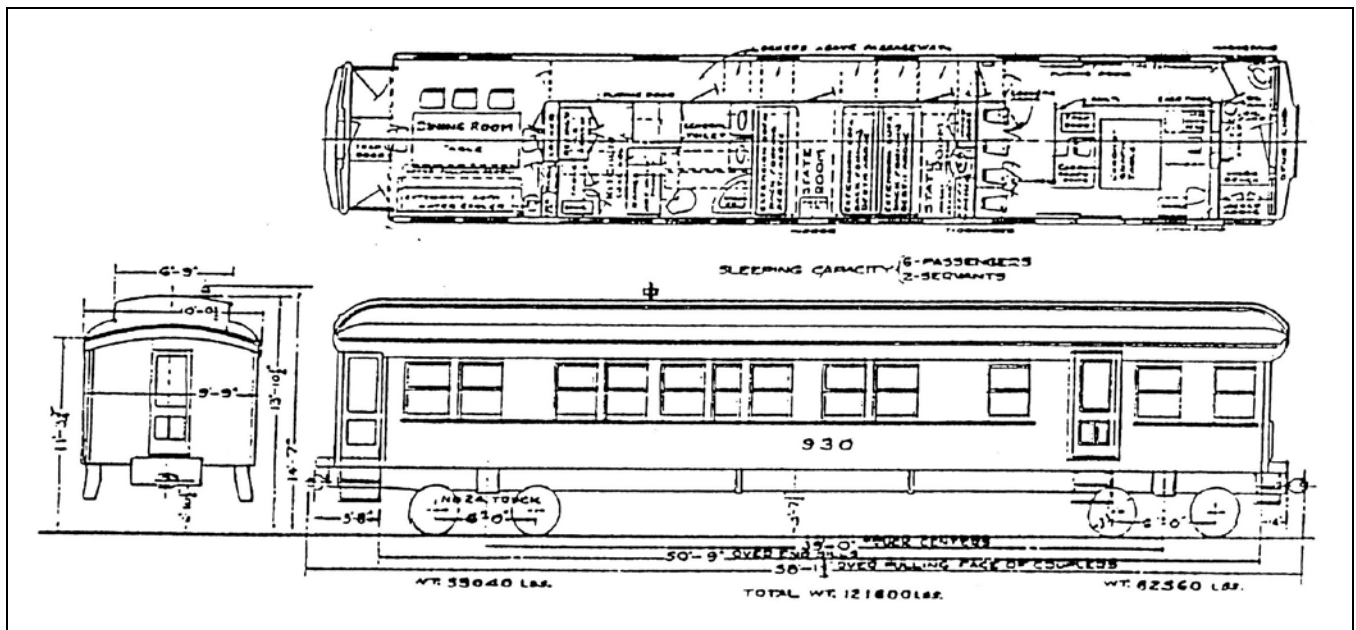
Left Side



Right Side



Left Side



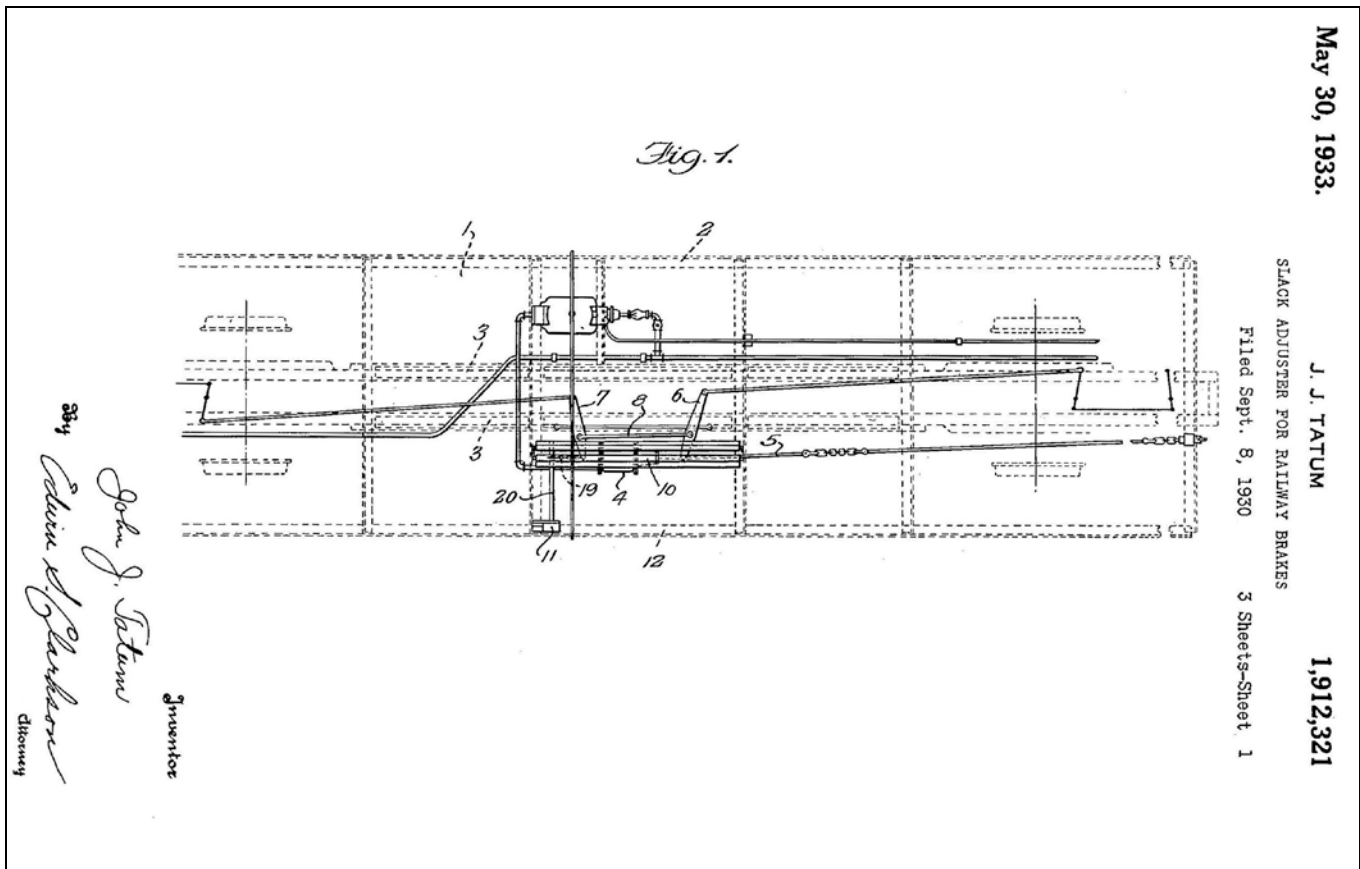
THE TATUM XLT SLACK ADJUSTER FOR CUSHIONED UNDERFRAME BY JOHN TEICHMOELLER

Modeler No. 44 presented patent drawings and some modeling ideas for the fixed underframe version of Tatum's slack adjuster. This article is a follow-up with Tatum's patent no. 1912231 dated May 30, 1933. We reproduced Figures 1-5 from the patent, courtesy Ed Kirstatter. This design was probably especially important to the B&O because of its advocacy of the Duryea cushioned underframe.

Figure 1 shows the plan view of the underframe as viewed from the top of the car. In comparing this figure to Figure 1 on page 34 of *Modeler No. 44*, it will be noticed that there is a rectangular assembly. The key to the design is that the two levers, 6 and 7, are mounted to a support frame which is mounted to stationary part of the car underframe and remains stationary when the center sill moves. This general arrangement information in theory should give a modeler some background to interpret prototype photos and engineer that slack adjuster on a car with a model of a Duryea underframe. We will leave it at that and wish you best of luck! Photos of your model with a cushioned underframe and slack adjuster are welcome.

From a modeling standpoint, the visible aspects of this version of the slack adjuster, the plate that hangs from the side sill and the transverse rod behind it-- seems about the same as the basic version, although due to the need to have the apparatus linked to a fixed element, Fig. 1 shows it being located near the center of the car.

John Teichmoeller



May 30, 1933.

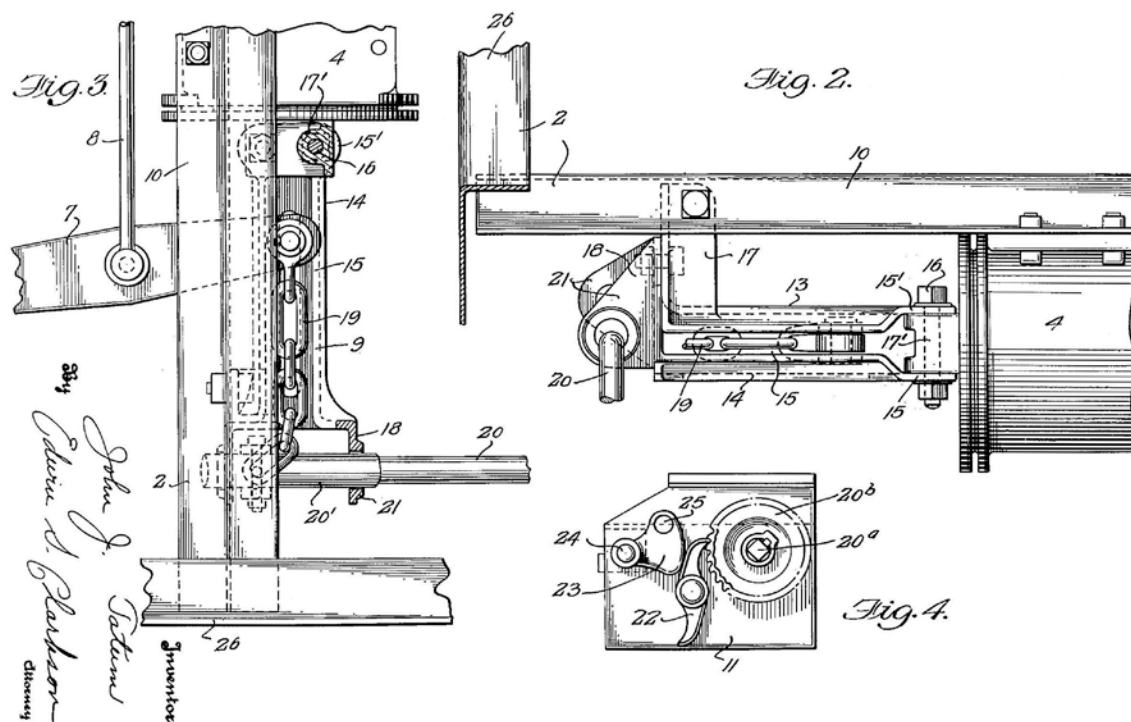
J. J. TATUM

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SLACK ADJUSTER FOR RAILWAY BRAKES

Filed Sept. 8, 1930

3 Sheets-Sheet 2



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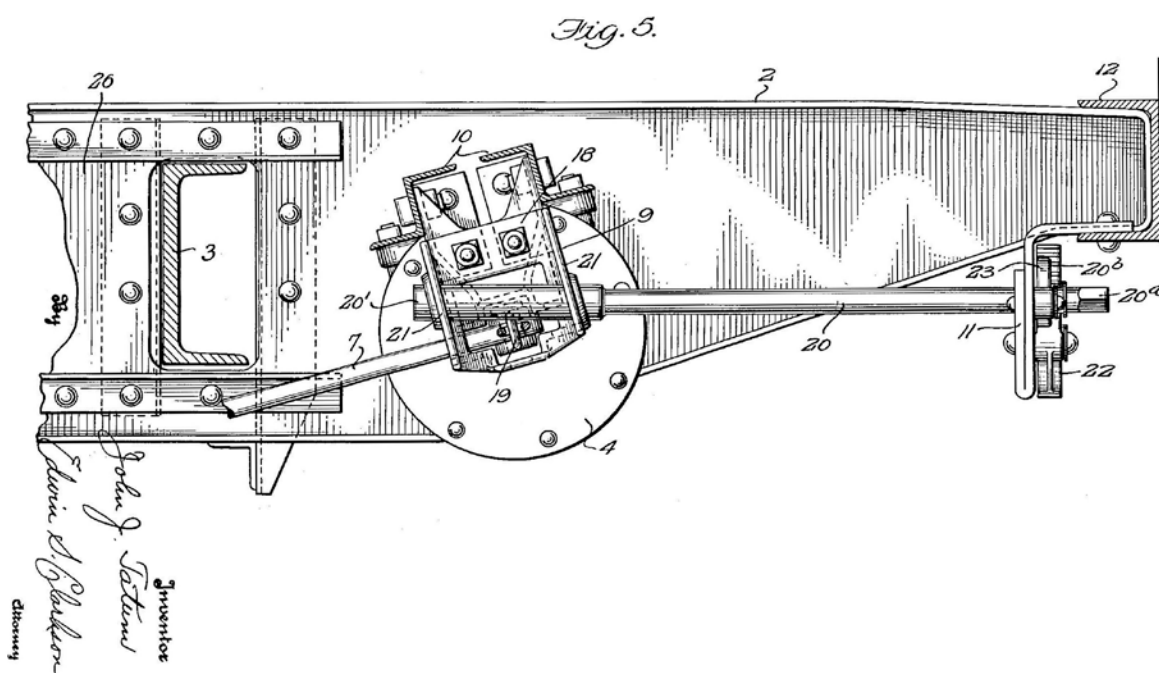
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UNITED STATES PATENT OFFICE

JOHN J. TATUM, OF BALTIMORE, MARYLAND

SLACK ADJUSTER FOR RAILWAY BRAKES

Application filed September 8, 1930. Serial No. 480,548.

In my application for patent for slack adjuster for brakes for railway cars filed August 15, 1929, Serial No. 386,055, I have disclosed a slack adjuster for cars built of the conventional type, such as have the center sills of the car and the trucks and body structurally combined so that one will follow the other in movement over the rails under all conditions when being drawn in trains by the locomotive, regardless as to whether the train is being moved by momentum or by impact.

The present invention has for its object to provide a slack adjuster for railway cars coupled with what is known as a cushion under-frame, in which the trucks are swivelled to the car body structure for relative steering movements to follow the line of the track, while the center sills and draft attachments are slidably mounted on the body structure so as to adapt the body structure and center sills with the draft attachments to have relative longitudinal movements. In accordance with my invention, the parts of the slack adjuster are mounted upon the car body structure independently of and without connection with the center sills, and the truck levers of the foundation brake gear are pivotally mounted on the trucks for movement therewith but are free from attachment to the center sills, so that, as the car body structure and center sills are free for relative longitudinal movements, the brakes may be applied and be adjusted without restriction or liability of damage under buffing and draft movements.

My present invention, therefore, resides broadly in a slack adjuster adapted for cars of the type described allowing free longitudinal movement of the center sills independent of the movement of the car body, trucks and foundation brake gear and in which the truck dead lever is mounted independently of and without connection with the car body or center sills.

In the drawings:

Fig. 1 is a top plan view of a brake rigging embodying my invention on a car, the outlines of the car being shown in dotted lines.

Fig. 2 is a fragmentary longitudinal section of a portion of the under-frame of the car showing parts of the slack adjuster mounted thereon.

Fig. 3 is a plan view of the parts shown in Fig. 2.

Fig. 4 is a side view looking toward the bearing bracket for the outer end of the slack adjuster shaft and showing the outer end of the shaft and the shaft locking means.

Fig. 5 is a transverse section through a part of the under-frame and showing one of the center sills and the parts of the slack adjuster.

Referring now more particularly to the drawings, 1 designates the car body, 2 a cushioned under-frame for the truck body, 3 the center sills, 4 the brake cylinder and piston, 5 the push rod extending into one end of the cylinder and connected to the piston therein, 6 the live cylinder lever coupled to the push rod, and 7 the rear cylinder lever coupled at one end by the rod 8 to the live cylinder lever, all of which parts of the car structure and foundation brake gear as thus far described may be constructed and arranged as in standard cars of the type referred to, wherein such parts of the brake gear are mounted on the cushioned under-frame and trucks, and the center sills and draft attachments have free longitudinal movement independent of the car body and its cushioned under-frame, trucks and foundation brake gear. My invention provides a slack adjuster which is mounted upon the car body under-frame structure and is movable with the car body and foundation brake gear attached to the car body and its under-frame and operatively coupled to the rear cylinder lever mounted on the under-frame, and in turn coupled through the cylinder levers to live and dead levers on the trucks, which truck levers are entirely free from connection with the car body structure or center sills so that the range of brake cylinder piston travel can be regulated for simultaneous adjustment of slack of the brake gear on both body and trucks without the use of other adjusting means, and the brakes may be applied and be adjusted without restriction.

tion or liability of injury under buffing and draft strains.

In accordance with my invention, I provide a support and guide frame or casing 9, which is attached to the rear end of the brake cylinder and to a longitudinal under-frame member 10, and which coacts with a bracket 11 fastened to a side sill 12 of the under-frame structure to support and guide the parts of the slack adjuster. The said frame or casing 9 comprises a pair of superposed members or sections 13 and 14 of a cross-sectional shape to form a casing extending longitudinally of the car and having longitudinal slots 15 at its sides. At their inner ends the members 13 and 14 have apertured portions or flanges 15 for attachment by bolts or rivets 16 to bosses 17 formed on the rear end of the brake cylinder and at its outer end the member 13 is provided with an upstanding lug 17 fastened to the longitudinal under-frame member 10 to which the brake cylinder is attached, while the member 14 is formed at its outer end with an upstanding U-shaped or forked bracket 18 which is fastened to the said lug 17 of member 13, whereby the supporting guide frame or casing is rigidly mounted in position for movement with the under-frame and brake gear carried thereby.

As shown, the frame or casing 9 receives the pivoted end of the lever 7 which extends therinto through one of the slots 15, whereby such end of the lever is supported and guided. Arranged within and protected and guided by the frame or casing 9 is a flexible element 19, such as a chain or cable, which is fastened at one end to the entering end of lever 7 and at its opposite end to the inner end 20' of a winding shaft 20 journaled at said end in bearings in the fork arms 21 of the bracket 18 and journaled at its outer end in the bracket 11. The element 19 forms an adjustable fulcrum for the lever 7 which can be taken up or let out by the winding shaft to adjust the lever 6 and thereby adjust the brake rigging and regulate the travel of the brake cylinder piston to a desired degree, by which means the slack in the brake gear on both body and truck is simultaneously adjusted.

As shown, the outer end 20^a of the shaft 20 is arranged beneath the side sill 12 within the clearance line of the car so as to comply with the American Railway Association regulations respecting clearance, ensuring avoidance of any restrictions against the operation of the car over any or all railroads in this country.

The shaft 20 is also located at one side of the center sills 3 in such manner that it and the levers 6 and 7 will lie clear of said sills, so that these parts may have free movement without interference with or by the center sills.

The said outer end 20^a of the shaft 20 is rectangular and a ratchet wheel 20^b is keyed thereto, there being a pawl 22 suitably mounted on the bracket 11 to engage and hold the ratchet wheel in an adjusted position. To hold the pawl 22 in its interlocked relation to the ratchet wheel 20^b under all service conditions, I provide a weighted dog 23 pivotally mounted at 24 and adapted for wedging engagement with the pawl, thereby holding the pawl against accidental disengagement from the ratchet wheel 20^b. The dog is provided with a lug 25 which may be struck with a suitable instrument to move it from wedging relation with the pawl to permit of rotation of the ratchet wheel when desired. On revolving the shaft 20 for taking up slack in the brake gear the chain 19 is wound around the shaft, thereby pulling on the lever 7 to shift its fulcrum point and, through it, to adjust all brake connections on the under-frame and truck to take up slack therein and to simultaneously regulate the brake piston travel accordingly. This ensures a proper and effective application of brakes, both hand and air, and avoids both excessive piston travel and excessive hand brake travel in the application of the brakes.

Fig. 5 shows one of the center sills 3 passing through and loosely surrounded by a transverse member 26 of the car under-frame structure 2, to which center sills there are no attachments of the car structure or brake gear, such sills being permitted to move longitudinally free and independent of the car structure and brake gear.

Having thus fully described my invention, I claim:—

1. In a slack adjuster for railway car brakes, a brake cylinder and piston, a push rod extending into the cylinder at one end and connected to the piston therein, a live cylinder lever coupled to the push rod, a slotted support connected to the opposite end of the cylinder, a winding shaft carried by the support, a rear cylinder lever coupled to the live cylinder lever and having an end thereof extending into the support through the slot thereof, and a flexible element forming an adjustable fulcrum for the rear cylinder lever and arranged and guided in said support and connected to the shaft and to the guided end of said lever.

2. In a slack adjuster for railway car brakes, a brake cylinder and piston, a push rod extending into the cylinder at one end and connected to the piston therein, a live cylinder lever coupled to the push rod, a slotted support connected to the opposite end of the cylinder, a rear cylinder lever connected at one end to the live cylinder lever and having its opposite end extending into the support through the slot therein and guided thereby, a winding shaft journaled at one end in said support, and a flexible ele-

ment in said support and connecting the
shaft with the guided end of the rear cylin-
der lever, said shaft extending at its oppo-
site end to a side of the car and having
5 means at said end for operating it.

In testimony whereof I affix my signa-
ture.

JOHN J. TATUM.

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