

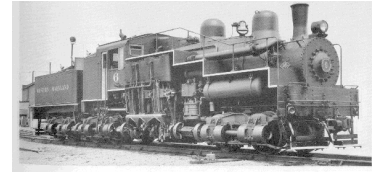
# LocoGear

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## Technical Bulletin - 12

June 13, 2008

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### **Published Information Resources for Western Maryland Railway #6 and Greenbrier, Cheat & Elk Railroad #12**

This *LocoGear Technical Bulletin* is an attempt to catalog each instance where published information is available for both the **Western Maryland Railway #6** and the **Greenbrier, Cheat & Elk Railroad #12**. Due to their notoriety, it is not surprising that quite a bit of information has been published about both of these two Shays, including both railroad industry as well as hobby publications.

Shays have been a popular topic over the years and there are many other publications on Shays which are not included here as they do not have specific references to **GC&E #12** or **WM #6**. This does not mean that such publications are not worth having for a well rounded library on the Shay locomotive. General information about Shay locomotives can be very valuable and worth knowing in your construction of a live steam model Shay locomotive.

You will want to consider adding each of the publications listed here to your library of reference materials. Although these publications are not necessary to build a live steam model of either **GC&E #12** or **WM #6**, they will be very helpful in your understanding of their specific history as well as mechanical specifications and workings. We have attempted to briefly outline the content of these publications as to the information specifically related to **WM #6** and **GC&E #12**, so you can

determine your interest or the necessity of obtaining the publication. For a quick reference, we have used the symbols **6** to identify publications with content relating to the **WM #6**, and **12** to identify content relating to **GC&E #12**.

For some publications, you may want to borrow them from a library or a friend and just photocopy those pages noted, as the publication may otherwise be quite large and contain additional information on other topics which may be of less interest. Some out of print publications are also quite expensive. It should also be noted that some publications contain duplications of photos and drawings that are available in other listed publications. Most of the publications are now out of print, however, many can be found through used book dealers, on-line auctions, and model railroad and railroadi-ana shows.

If you know of other references existing for either **GC&E #12** or **WM #6**, that are not listed here, please let us know and we will add them to the list. These publications are listed chronologically by publication date. A photo of the publication's cover is included to help you identify these publications.

## ***Locomotive Cyclopedia of American Practice, 12***

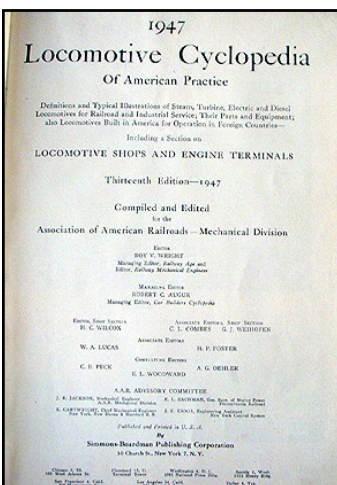
### ***Seventh Edition—1925***

Originally published in 1925 by Simmons-Boardman, republished in 1973 by Newton Gregg. This book has been out of print for some time. On page 953 is the Lima builder's "Paster" card photo of **GC&E #12** along with two drawings including a partial right side elevation drawing of the engine only (no tender or third truck), and a sectional view near the backhead. A brief list of **GC&E #12's** technical details is also included. The **GC&E #12** was fitted with many commercially available appliances and some of these are also shown in this book. On page 296-297 is a drawing and photo of the *Sellers Class N Lifting Injector*. On page 372-373 is a drawing and photo of the *Franklin Railway Supply No. 9 Fire Door* (vertical clamshell design). On pages 749-750 is a photo and drawing of the *Tower Coupler by National Malleable & Steel Castings Co.* On page 788-789 are a drawing, photo and description of the *Westinghouse 9½" Air Compressor*.



### ***Railway Age Magazine 6***

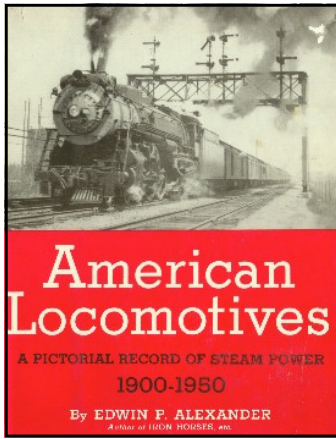
This October 6, 1945 issue of Railway Age has a detailed article of the **WM #6** which was just put into service earlier in 1945. The article describes how the Shay locomotive was used on heavy grades in the mining district, and was designed for use on 7 to 10 percent grades and maximum curvature of 22 degrees. This is an excellent detailed 4-page article with 7 photos. Many of the **WM #6's** specification are listed here. This article was the basis for its inclusion in the *1947 Locomotive Cyclopedia of American Practice-Thirteenth Edition*, which was printed by the same publisher, see below.



## ***Locomotive Cyclopedia of American Practice, 6***

### ***Thirteenth Edition—1947***

Published in 1947 by Simmons-Boardman. This book has been out of print for some time. On pages 120-121 are a right side elevation drawing along with several sectional views of **WM #6** and truck sectional drawing. A brief list of **WM #6's** technical details is also included. Three Lima builder's photos are included along with a photo of **WM #6** in operation. The **WM #6** was fitted with many commercially available appliances and some of these are also shown in this book. On page 382-297 is a drawing of the *Sellers Class N Lifting Injector*. On page 429 is a photo of the *Franklin Railway Supply No. 8 Fire Door*. On pages 506-507 are photos and drawings of the *Nathan Whistle*. On page 510 is a photo and description of the *Pyle-National "K-240" Turbo-Generator*. On pages 566-567 is a drawing and description of the *Alco Power Reverse Type "G"*. On pages 762-763 are drawings, photos and descriptions of the *AAR Type "E" Coupler* made by *National Malleable & Steel Casting Co.* On pages 769-771 is a drawing and description of the *Miner Class A-22-XB Draft Gear*. On page 787 is a drawing and on page 791 is a description of the *Westinghouse 8½" Cross Compound Air Compressor*.



### *American Locomotives, A Pictorial Record of Steam Power, 1900-1950* ⑥

Written by Edwin P. Alexander, this 256 page book was published in 1950-970 by Bonanza Books. This book has been out of print for some time. On page 243 is the Lima builder's "Paster" card photo of **WM #6** and the right side elevation drawing from the *1947 Locomotive Cyclopedia*. On page 242 is a brief description with technical details of **WM #6**.



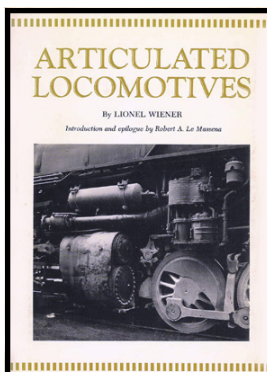
### *Pacific Coast Shay, Strong Man of the Woods* ⑥

Written by Dan Ranger, Jr. Published in 1964 by Golden West Books. This 112 page book has been out of print for some time. It tells the story of the Pacific Coast Shay locomotives built in the 1920's, the "hay day" of Lima Shays. Several of the Pacific Coast Shay design features were later applied to the **WM #6**, although it is not technically a Pacific Coast Shay. An excellent right side builder's photo of **WM #6** is on page 55.



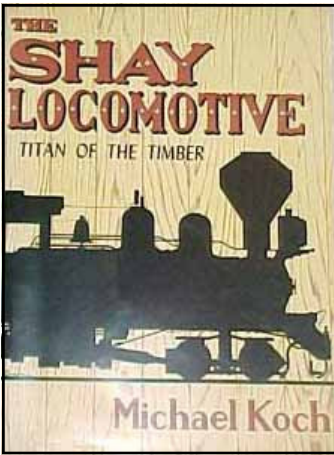
### *Trains Magazine* ⑥

August, 1967, pp. 32-49. An article "*Shay: The Folly that was Worth a Fortune,*" written by R. Dan Ranger, Jr. chronicling the history of the Shay Locomotive. An excellent close-up front end Lima builder's photo of **WM #6** is on the front cover. On page 40 is the Lima builder's "Paster" card photo of **WM #6**, and on page 49 is a brief history of this last Shay built.



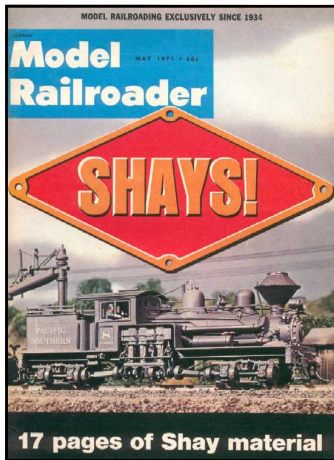
### *Articulated Locomotives* ⑫

Written by Lionel Wiener, this 632 page book was originally published in 1930 and republished in 1970 by Kalmbach. This book has been out of print for some time. It tells the world-wide story of articulated locomotives of every description, including Shays. On page 46 is the Lima builder's "Paster" card photo of **GC&E #12**, and a brief technical description of this Shay is found on page 39 and 47.



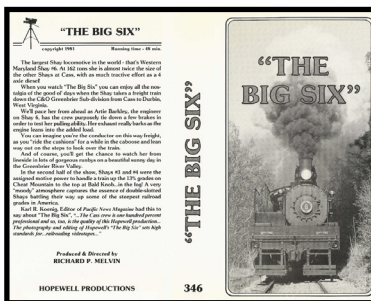
## *The Shay Locomotive, Titan of the Timber* ⑥

Written by Michael Koch and published by World Press in 1971. This book has also been out of print for some time and commands a \$300-\$400 price in the used book market. This book is the definitive story of the Shay locomotive. From pages 369 through 382, there is a photo section devoted to the last Shay, **WM #6**. Most of these photos are reproduced in full page format. These include many of the detail Lima builder's photos taken in May, 1945. They include several overall views: overhead, left side, and right side. Also included are close-up views of the cab, engine, bottom bracket, eccentrics, truck and couplings, Westinghouse air pump, cab interior, and the front end. Also there are three photos of **WM #6** in action on the Chaffe Branch. Both the photo and technical details sides of the Lima builder's "Paster" card for **WM #6** is reproduced.



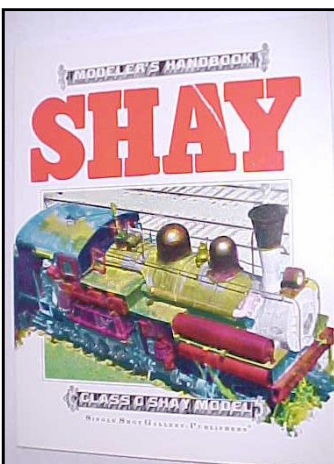
## *Model Railroader* ⑥

May, 1971 pp. 43-46. This article, "Largest of the Shays," includes a brief history of **WM #6** and a complete set of 3/16" scale (S Gauge) drawings by Allen J. Brewster showing both sides, front and rear ends, and sections. Also included are several overall and detail builder's photos.



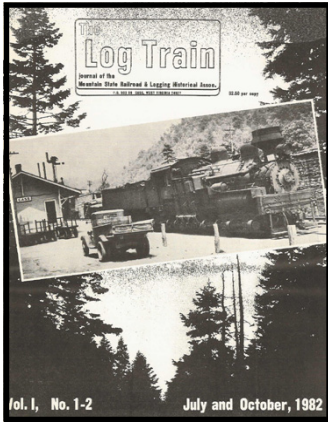
## *The Big Six* ⑥

1981, VHS - running time: 48 minutes. This video was produced and directed by Richard P. Melvin and released by Hopewell Productions. The first half of this video shows an introduction of the **WM #6** and an interview with a Chessie System official turning the Shay over to Artie Barkley, the Cass Scenic Railroad engineer in 1980 for the 50 year lease. Then it shows the **WM #6** in action on a trip from Cass to Durbin along the Greenbrier River Valley. The second half of the video shows **Cass #3** and **#4** on a trip up the mountain to Bald Knob.

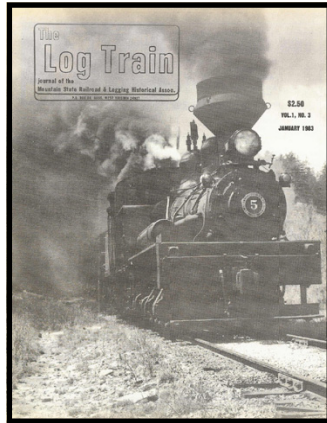


## *Shay Modelers Handbook, Class C Shay Model* ⑥ ⑫

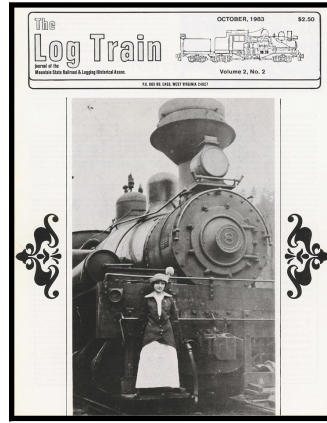
Written by Richard and Violet Appel and published by Single Shot Gallery in 1984. This book is written for the HO scale modeler in mind and has many detail photos showing Shay construction. Both Shays are included in this book. Photos of **WM #6** include two different right side and three detail builders photos. The two photos of **GC&E #12** include the right side builder's photo and an action photo on the GC&E. Both photos show **GC&E #12** with three trucks.



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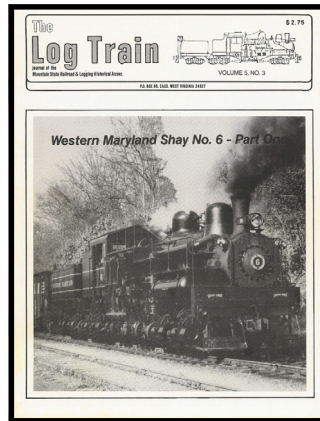
**Vol. 1, No. 3**



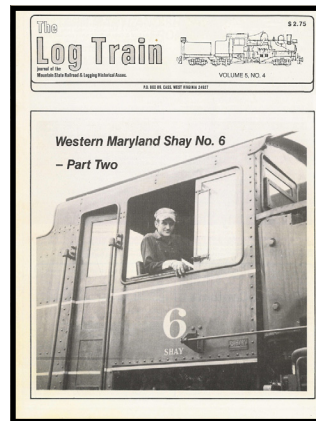
**Vol. 2, No. 2**



**Vol. 3, No. 4 / Vol. 4, No. 1**



**Vol. 5, No. 3**



**Vol. 5, No. 4**



**Vol. 6, No. 1**

***The Log Train* ⑥ ⑫**

Published by the Mountain State Railroad & Logging Historical Association, several articles listed below include information on both the **GC&E #12** and the **WM #6** as well as operations of both railroads and the other Shays that they ran. Most of the information on **GC&E #12** contained in *The Log Train* articles is included in Philip Bagdon's new book on Shays at Cass (see page 6). Copies of back issues of *The Log Train* are available for \$4.00 each from:

MSR&LHA Company Store  
 Bob Hoke  
 6304 Kaybro St.  
 Laurel, MD 20707

- **Vol. 1 #1&2** (July/October, 1982 combined issue) pp. 6-12. This article "Greenbrier, Cheat & Elk No. 12" by George Deike is the first part of a two part article on the history of **GC&E #12**.
- **Vol. 1 #3** (January, 1983) pp 8-10. Part two of the above article on **GC&E #12**.
- **Vol. 2, # 2** (October, 1983) pp. 14-15. The title of this article "Technical Musings on a Giant Shay" by Richard Sparks describes its content about **GC&E #12**.
- **Vol. 3 #4 / Vol. 4 #1** (January/April, 1986), The entire 28 page combined issue is written by George A. Fizer on the Western Maryland's Chaffe branch. It includes all the WM's Shays and their spec. sheets, photos, roster and history of the branch. This is where all the WM's Shays worked.

*The Log Train* devoted the following three issues to a three part article on **WM #6** (over 60 pages total

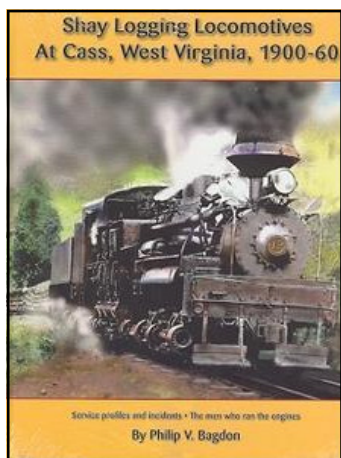
with many photos). This is the most comprehensive publication on **WM #6** including construction and operating history, technical specifications, drawings and photos.

- **Vol. 5 #3** (October, 1987), **Part One** “The Birth of the Big Six” by Fred Bartels covers the construction and specifications of **WM #6**. Also the article “Arch Tubes or Syphons?” by Gerry Futej discusses the Nicholson thermic syphon that was installed in the **WM #6**’s boiler in 1949. Also included is text and photos of the B&O news release discussing the donation of **WM #6** to the Baltimore and Ohio Railroad Museum.
- **Vol. 5 #4** (January, 1988), **Part Two** “Western Maryland Shay No. 6—From Baltimore to Cass” by Fred Bartels discusses the efforts to prepare and transport **WM #6** to Cass in August, 1980.
- **Vol. 6 #1** (April, 1988), **Part Three** “Restoration of the Big Six” by Fred Bartels discusses the condition of **WM #6** upon its arrival at Cass and what they did to repair it for service.



### *Cass & Mower Logging Trains* ⑥

1996, VHS - running time: 90 minutes. This video was released by Green Frog Productions. Various shots of the **WM#6** are shown among other Shays #2, #3, #4, #5, and Heisler #6, on the Cass Scenic Railroad. Most of the **WM#6** footage is on the Durbin branch which was operated from 1981 to 1985. Vintage film is shown of logging operations of the mower Lumber Company which operated the GC&E until 1960.



### *Shay Logging Locomotives At Cass, West Virginia, 1900-1960* ⑥ ⑫

Written by Philip Bagdon and recently published by TLC Publishing in 2001, this book contains extensive operational and mechanical histories of all the Shays operated by the Greenbrier, Cheat & Elk out of Cass, W.Va. Several photos of **GC&E #12** in operation are included, one being on the front cover. An in-depth discussion about the conversion of **GC&E #12** from a three-truck to a four-truck Shay is included, as well as the controversy over the wreck of **GC&E #12** in 1942. The **WM #6** is also mentioned in this book in conjunction with the attempts of the GC&E to sell the **GC&E #12** to the Western Maryland.