THE RAILWAY & LOCOMOTIVE HISTORICAL SOCIETY

NEWSLETTER

SUMMER 2006 WWW.RLHS.ORG VOLUME 26, NUMBER 3

1941

The Timeless Appeal of Colorado Narrow Gauge

2006

Rails in the Rockies II - Annual Meeting Report

In This Issue. . .

Caboose silhouettes appearing at the end of each article are by Benn Coifman, www.Railfonts.com.

Cover Photos

Top: D&RGW 475 with train #116, the San Juan, top of Cumbres on June 13, 1941. *Otto C. Perry photo, Courtesy of the Southern California Chapter of the Railway & Locomotive Historical Society.*

Bottom: Durango & Silverton 481 about to depart Silverton for Durango on Friday, June 9, 2006. *David Lester photo.*

www.rlhs.org

The Railway & Locomotive Historical Society Newsletter

Charles P. Zlatkovich, President
1610 North Vinton Road
Anthony, NM 88201

David C. Lester, Editor
215 Bent Oak Lane
Woodstock, Georgia 30189-8121
E-Mail: *davidclester@aol.com*

Member Services

Membership applications, change of address and other membership status inquiries should be sent to :

R&LHS Membership
William H. Lugg, Jr.
P.O. Box 292927
Sacramento, CA 95829-2927

Trading Post

Society members may use, without charge, the Trading Post section of the quarterly newsletter and the R&LHS web site to advertise items they wish to sell, trade or acquire or to seek information from other readers. This service is intended for personal, not general commercial, use. All items should be sent to David C. Lester at the address to the left.

ARCHIVES SERVICES

The Railway & Locomotive Historical Society Archives Services provides four key services to members, which are listed below. All inquiries regarding these services should be addressed to R&LHS Archives Services, P.O. Box 600544, Jacksonville, Florida 32260-0544.

Locomotive Rosters & Records of Building Construction Numbers

The Society has locomotive rosters for many roads and records of steam locomotive construction numbers for most builders. Copies are available to members at 25 cents per page, 40 cents per page for non-members ($5.00 minimum).

Back Issues of *Railroad History*

Many issues of Railroad History since No. 139 are available to members at $7.50 per copy, $12.50 for nonmembers. For more information on the availability of specific issues and volume discounts, write to the Archives Services address above.

Articles from *The Bulletin* & *Railroad History*

Copies of back issues of these publications of the Society are available to members at 20 cents per page, 30 cents per page for non-members ($5.00 minimum).

Research Inquiries

Source materials printed, manuscript and graphic, are included in the Society's Archives. Inquiries concerning these materials should be addressed to the Archives Services address above. To help expedite our response, please indicate a daytime telephone number where you can normally be reached.

About The *Newsletter*

The Railway & Locomotive Historical Society *Newsletter* seeks to serve as a vehicle for communication among the Society's Board of Directors, Chapters, and the over 50% of the membership which does not belong to a chapter. To accomplish this, the *Newsletter* reports Society news from three perspectives:

First, from that of the national organization, which is responsible for fulfilling the nine goals presented in the Society's Mission Statement.

Second, from that of the eight chapters of the Society, each of which are engaged in various activities to promote and preserve railroad history.

Third, from that of the individual member, who is engaged in research, interpretation, preservation and celebration of railroad history.

Each quarterly issue of the *Newsletter* includes the following sections: National Report, Chapter Reports and Trading Post. In addition, each issue will include at least one feature article that presents how railroad history is studied, researched, documented, preserved, communicated, displayed and celebrated. In addition, we have three regular columnists, listed at left.

Feedback on the *Newsletter* is always welcome, as are suggestions for feature articles. Please send any feedback, news items or suggestions to the Editor via U.S. Mail or e-mail.

Publication Schedule for 2006

Issue	Deadline for Submissions	Mail Date
Winter 2006	January 6	February 1
Spring 2006	April 7	May 1
Summer 2006	July 7	August 1
Fall 2006	September 8	October 1

From The Editor

For those who have studied railroad history for any length of time, the narrow gauge railroads in Colorado and New Mexico, built in the nineteenth century by the Denver & Rio Grande Railway, are likely familiar subjects. However, during my recent trips on both the Durango & Silverton Narrow Gauge Railroad and the Cumbres & Toltec Scenic Railroad, as part of the 2006 Railway & Locomotive Historical Society Annual Meeting, I learned that a number of people, like me, had not had the opportunity to visit and travel over these wonderful examples of nineteenth century technology.

For me, the narrow gauge lines are interesting on three levels. First, from the perspective of economic history, these lines were built to facilitate the extraction of the rich mineral resources of the San Juan Mountains. Narrow gauge was chosen because it meant that the trains could more effectively negotiate the tight curves of the route into the mountains, and the line was less expensive to build and maintain. Second, the locomotives, which were built in the nineteenth century, have been meticulously maintained by the railroads' own shops, with new parts being manufactured and replaced on site. Third, the scenery is spectacular. The lines travel through remote country in Colorado and New Mexico, offering views of the landscape that are not easily accessible by any other route. If you have not had the opportunity to visit these rail lines, they are worthy of your consideration. If you don't have the opportunity to visit in person, I encourage you to take advantage of the plethora of books and articles that have been devoted to narrow gauge railroading in the West.

In addition to the wonderful rail trips, the approximately 120 members attending the Annual Meeting, held from June 8 - 11, 2006 in Pagosa Springs, Colorado, enjoyed extensive fellowship, the annual banquet, the perusal of new and used railroad books offered by member Chuck Macklin, owner of RailroadBooksBiz, and the annual business meeting of the Society. The Society's Board of Directors also met on Friday, June 8.

This issue includes a full report on the Annual Meeting, which begins on page 3. In addition, we've included a piece on th Edwards Motor Car Company, compiled from Cary Franklin Poole's book on the same subject. Bill Howes has prepared the second installment in his series on the offerings of the Society's archives, and we have the second of our series of four articles on the development of the Encyclopedia of North American Railroads, scheduled for publication by Indiana University Press in Spring 2007. All of this in addition to our regular columns and features.

As mentioned above, the 2006 Annual Meeting was a tremendous success. This success was due to the efforts of the four people in the photograph below - Ken and Ann Miller, and Mike and Sigi Walker. The Walkers worked tirelessley with the hotels, railroads, and other vendors to arrange a four-day meeting that literally ran like clockwork. Every detail was carefully considered, and I heard one member say that they had been on "professionally" run corporate outings that had not run as smoothly. The Millers performed yeoman service in executing many of the day-to-day details of the trip, from ensuring that everyone knew which bus they were assigned to, to seeing to everyone's comfort and various needs during the trips. A truly impressive accomplishment by these four leaders of our Society.

*Left to right - **Kenneth C. Miller**, Assistant Secretary of the R&LHS, and Chairman, Lackawanna Chapter; **Ann B. Miller**, a member of the R&LHS Board of Directors; **R. Michael Walker**, Treasurer of the R&LHS; **Sigi Walker**, R&LHS member extraordinaire. These four individuals put forth a tremendous effort to make the 2006 Annual Meeting of the Society a grand success.*

Rails in the Rockies II

The Annual Meeting of the Railway & Locomotive Historical Society Pagosa Springs, Colorado June 8 - 11, 2006

Article and Photographs by David Lester, unless otherwise noted

The 2006 Annual Meeting in Pagosa Springs was a great blend of rail travel, fellowship, learning, and culminated with announcements about leadership changes in the Society at the annual business meeting.

The first day of the Annual Meeting, Thursday, June 8, was devoted to gathering those who had traveled to either Albuquerque or Santa Fe, New Mexico for the bus ride to Pagosa Springs, which is located in soutwestern Colorado, in the heart of the San Juan Mountains. The first order of business upon arrival at Pagosa Springs was the R&LHS Board Meeting, held from 7:00pm to 10:00pm at the Pagosa Lodge. The meeting was chaired by R&LHS President Charles Zlatkovich, and some news from the meeting will be presented later in this report.

Durango & Silverton #481 pulling a train load of passengers, including R&LHS members on Friday, June 9, 2006.

For most attendees, however, the meeting began in earnest when buses departed Pagosa Lodge on Friday morning, June 9, for Durango, Colorado. Upon arrival in Durango at 8:15am, members boarded the train for the 45-mile, 3.5 hour trip to Silverton. Durango sits at just over 6,500 feet above sea level, and the temperatures were in the low 50's as the train headed north (considered westbound by the railroad) to Silverton.

The line parallels the Animas River for the entire journey between Durango and Silverton, and for the first seventeen miles, also parallels state highway 550, which can be seen on the left, or west, side of the train. Just south of Rockwood, near milepost 468, at an elevation of 7,328 feet, the line turns northeast (still considered westbound, though), away from the highway, and follows the Animas River through Colorado back country to Cascade (elevation 7,696 feet), Needleton (elevation 8,160) then up the grade to Silverton, at milepost 496, at elevation of 9,305 feet. The train makes a water stop just north of Needleton, where the water is stored in a tank car. However, at Needleton, there is a wonderful old water tank which the railroad hopes to refurbish and have in use one day.

Once the train arrived in Silverton, passengers dispersed to various eateries and shops to enjoy the two-hour layover. At 1:50pm, the locomotive whistle sounded, as everyone was called aboard for the return trip to Durango. Since we had assigned seating, on the return trip, everyone saw the opposite side of the line from the one they had seen coming to Silverton, except, of course, for those who braved the vestibules or the "observation gondola".

When we arrived back in Durango, everyone enjoyed an excellent dinner at historic Strater Hotel, which was built in 1888. Since there were two dinner seatings, everyone also had an opportunity to spend some time at the depot, as well as a chance to tour the downtown area. Once everyone had finished their dinner and touring, we traveled back to Pagosa Springs.

On Saturday, June 10, the narrow gauge rail travel continued with a excellent, one-way trip from Antonito, Colorado to Chama, New Mexico on the Cumbres & Toltec Scenic Railroad. The town of Antonito, the eastern terminus of the Cumbres & Toltec, sits at milepost 281, at an elevation of 7, 888 feet above sea level.

Locomotive crew member preparing D&S 481 for journey from Silverton to Durango on 6/9/2006.

Upon arrival in Antonito, members boarded the train, and began a 64-mile journey during which the train would cross the Colorado - New Mexico border eleven times, and traverse flat expanses of land, as well as high elevations, affording more beautiful views of the southwestern landscape.

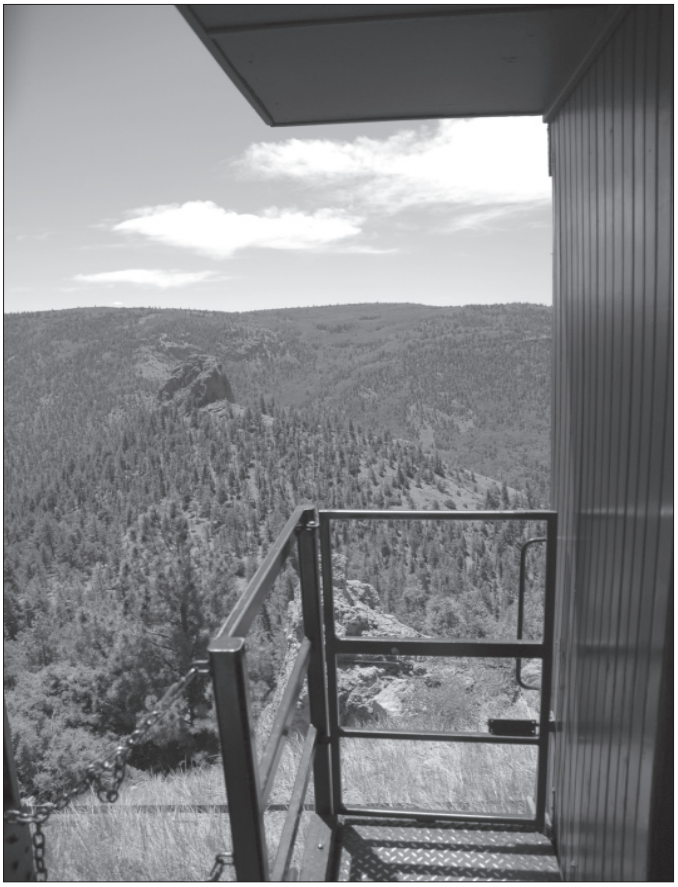
As the train heads southwest from Antonito, it crosses into New Mexico just past milepost 288, and crosses the state line several times before reaching milepost 316, from where it crosses back into Colorado for the next 18 miles. The trained arrived in Osier, Colorado, a remote point on the line just past milepost 318, around 12:00pm, and everyone left the train for lunch at the large cafeteria and gift shop facility. The food here was very good, and after eating, there was time to inspect several locomotives before changing trains for the continuation of the trip to Chama. Departing Osier at 2:00pm, the most exciting part of the trip was still ahead. As the train leaves from Osier, with an elevation of 9,637 feet, it travels through spectacular scenery as it makes its way up to Cumbres, then down to Chama. Just before milepost 331, the train reaches Cumbres, Colorado, which sits at an elevation of 10,015 feet, the highest point on the line.

From Cumbres, the line continues southwest and downgrade, crossing into New Mexico just past milepost 336, and on to Chama, eight miles away, at an elevation of 7,863 feet. The smell of brake smoke permeates the air as the engineer carefully managed the speed of the train.

After arriving at Chama, members had about 30 minutes to visit the depot, study and photograph the locomotives and rolling stock at the depot, as well as visit with a Galloping Goose, a motorized rail car that replaced steam passenger service on the Rio Grande Southern just after World War I.

After traveling back to Pagosa Springs, members freshened up, then headed to the annual banquet, held at Pagosa Lodge. In addition to good food, fellowship and reflections on the rail trips of the past two days, the program featured a welcome from Pagosa Springs Mayor Ross Aragon and Society President Charles Zlatkovich, and a presentation from Mel McFarland entitled "General Palmer in Southwestern Colorado".

On Sunday morning, June 11, the Annual Business Meeting of the Society was held at the Pagosa Lodge. During the meeting, Charles Zlatkovich announced that he would be remain president of the Society for one more year. He also announced that J. Parker Lamb had been


Aboard the Cumbres & Toltec Scenic Railroad, approaching Cumbres, Colorado on 6/10/2006.

appointed Executive Vice President of the Society, and that Mr. Lamb would assume the presidency of the Society next year. In addition, Mr. Zlatkovich announced the appointment of Arthur Lloyd Senior Vice President. Mr. Zlatkovich also announced that there have been two resignations from the Board of Directors - Mr. Robert J. Church, who is leaving to pursue other activities, and Dr. H. Roger Grant, who was recently named president of the Lexington Group in Transportation History. Parker Lamb then addressed the group, pledging to work with Charlie on a smooth transition during the next year, and also announced two new members of the Board - Mr. Dan Cupper, a professional journalist who currently serves as Deputy Editor of ***Railroad History***, and Dr. Robert Holzweiss, Curator of the George H. W. Bush Presidential Museum in College Station, Texas. The remainder of the Board was elected to a three-year term.

The business meeting concluded the annual meeting, except for those who had arranged to join Mike and Sigi Walker for the "Hot Shot Ride" from Santa Fe to the Galisteo Basin on the Santa Fe Southern Railway. The train departed from Santa Fe at 2:00 pm, arriving at the Galisteo Basin at 4:30 pm, whereupon the group traveled to back to Santa Fe by bus to enjoy dinner at Maria's New Mexican Kitchen, then continued back to Albuquerque.

News from the Board of Directors meeting, held on Thursday, included an announcement that the R&LHS will continue to hold its annual Railroad History Awards ceremony in conjunction with the annual meeting of the Lexington Group in Transportation History; the "Friends" program, which has been very successful, was extended for another two years, and Bill Lugg, our Membership Chairman announced his resignation for September of 2007, far enough in advance for a replacement to be found.)

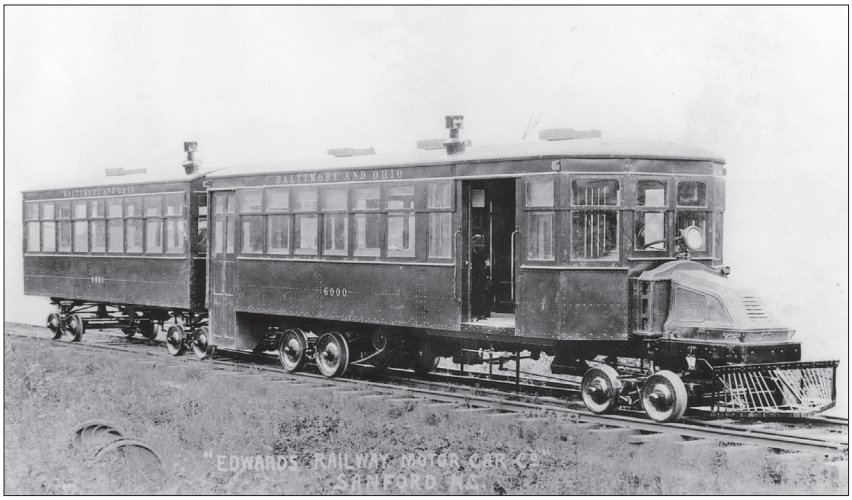
Society President Charles Zlatkovich addresses members during the annual business meeting.

Society Executive Vice President J. Parker Lamb, addressing the membership at the annual business meeting, pledging to work with President Zlatkovich on a smooth leadership transition during the coming year.

The Galloping Goose!

A special treat for members was the opportunity to see the Galloping Goose, upon arrival at Chama on Saturday, June 10, 2006.

D&RGW #482 with train #116, the San Juan, East of Chama, Durango to Alamosa on Sept. 3, 1939. *Otto C. Perry photo, courtesy of the Southern California Chapter of the Railway & Locomotive Historical Society.*



The Edwards Motor Car Company

by Cary Franklin Poole

Left: B&O No. 6000, an early Edwards car seen here with matching trailer, was delivered in 1922 and employed a chain-and-sprocket drive train which became the car's undoing. Kelly-Springfield supplied the truck chassis for this car. This unit was quickly traded in for a new unit also numbered 6000. *Collection of Jim Mischike*

The Edwards Railway Motor Car Company was formed in the early 1920s by Harry P. Edwards to construct railcars, or "doodlebugs" as they were commonly called. The cars were marketed primarily for shortline and branch-line service. While not as well known as its contemporaries such as the McKeen car, or Brill motorcars, the Edwards cars made a name for themselves for their uniqueness and reliability. The cars found their way to railroads across the country, including the B&O; CB&Q and shortlines such as the Atlantic & Western; Atlanta & St. Andrews Bay; Tucson, Cornelia & Gila Bend; Blue Ridge Railway; Virginia Central and many others including the U.S. Navy and Army. In the 1930s the cars, which were gasoline powered, lost favor in the U.S. but found their way south of the border. The 1930s Edwards cars had a distinctive streamlined shovel nose appearance and were sold almost exclusively in Mexico, Central, and South America.

By the time the Edwards Railway Motor Car Company ceased production in 1942 few companies were building gasoline-powered motorcars, preferring rather to concentrate on either gas-electric drive or diesel-electric drive. These were two concepts Harry P. Edwards had not pursued to any concentrated extent, and it may have doomed the Edwards co. in the tight market that lay ahead. The idea of a gasoline powered motor car remained dormant for several decades until the late 1990s.

In 1998, lifelong railroader and consultant Steven Torrico resurrected the Edwards co., now calling it the Edwards Rail Car Company. One of the first projects for the new Edwards company was to restore an original Edwards car, which was built in 1923 for the Washington & Lincolnton Railroad, before being sold to the Birmingham & Southeastern Railroad in 1929. The B&SE operated the car until the early 1970s when it was retired. It sat in Montgomery, Alabama for many years awaiting restoration. The car underwent a complete rebuild from the ground up which allowed the workers at the new Edwards co. to learn how early Edwards cars were constructed.

All remaining wood was removed from the body and certain pieces were saved in order to make copies. No. 500 was missing the entire front end and rear platform. These were fabricated using photographic evidence. The seats were also fabricated from scratch using photographs of the originals. Upon the completion of the restoration, in the spring of 2004, no. 500 was transported to the North Carolina Transportation Museum's Historic Spencer Shops to participate in its annual "Rail Days" event. (The Spencer Shops are also home to an original 1926 Edwards Model 20, Hampton & Branchville's M-200.) B&SE no. 500 stands today as the oldest operating example of an original Edwards rail car.

The Edwards Rail Car Co. has now built new Edwards cars completely from scratch. They have also been engaged to restore other rail equipment such as the *Wisconsin*, John Ringling's private business car that will be displayed at the Ringling Museum in Sarasota Florida upon completion. Another high profile contract has been awarded to the company to restore Dallas' MATA car no. 754 for operation on that line.

R&LHS member Cary Franklin Poole's new book "The Edwards Railway Motor Car Company – And its Innovative Founder, H.P. Edwards, The Doctor of Sick Shortlines" will be released in September 2006 by Hot Box Press. The publisher, R&LHS member Mark S. Vandercook utilized the R&LHS' online forum to help fill some gaps in the photographic record of the Edwards cars. Member Arnold Menke provided a photograph from his collection, and another member, Thornton Waite, even offered to photograph a car specifically for this project. Other members were able to point Mr. Vandercook to additional sources of photographs.

On The Horizon from Indiana University Press --

The *Encylopedia of North American Railroads*

This the second in a series of four articles about the upcoming publication by Indiana University Press, the ***Encyclopedia of North American Railroads****, edited by William D. Middleton, George M. Smerk and Roberta Diehl. Scheduled for a Spring 2007 release, work on the book has been under way for eight years. Since this will be a very significant publication event, the* ***Newsletter*** *is presenting these articles about the preparation and content of this major work. DCL*

Article II: The Technology of the Railroads and the Rail Revolution

The need to guide moving vehicles is an old one; there are traces of rutways in ancient Greece and even earlier. Something akin to railways as we know them began to appear in medieval mines of central Europe. The industrial revolution in Britain was abetted by early plateways and crude early railways. The genius of the railways lies in a durable base possessing little friction to impede passage upon which operate vehicles that follow the guideway using mechanical means of propulsion. A big factor is the ability of railways to move formidable loads quickly and at low expense.

The Encyclopedia of North American Railroads provides a complete explanation and description of rail technology from the earliest days to the present. The track and structure are the subjects of entries of considerable depth by Bill Middleton on the civil engineering of the railway lines, beginning with the process of surveying the proposed line. The means of construction and its evolution over time are covered and are heavily illustrated. There is discussion of the early attempts to find a suitable means of anchoring the rails and providing a firm but resilient base. There is detailed and well-illustrated discussion of railway bridges and tunnels and the methods of building them and the progress made in such engineering challenges over the years.

Motive power is given much room in detailed coverage of how steam, diesel, and electric locomotives do their job, in entries by J. Parker Lamb, Louis A. Marre, and Bill Middleton. Railway electrification is given complete treatment, along with the tasks of various types of steam and diesel locomotives. The encyclopedia includes entries on yards for freight and passenger services and maintenance facilities for rolling stock and motive power. The entries include discussion and illustration of the design and function of the facilities.

The signal and communication systems that have been used by railroads over time are the subject of several entries, from early ball signals to the use of the telegraph, automatic block signals, and on to centralized traffic control and the latest computer communication and control methods.

Beyond the coverage of the technology as such there are supporting entries on the individuals and firms that developed and supplied the technology. The story of the development of the airbrake and automatic coupler as well as the evolution of the various types of freight and passenger equipment from the start of the railway age to the present is the subject of a number of entries and illustrations.

Visual Interpretation

by John Gruber

A growing collection of images is available on the Internet for photo researchers, making resources from across the country available for at-home viewing. And more sites are on their way.

The American Memory of the Library of Congress has many, many railroad photos, sometimes difficult to find. Two collections are "Touring Turn-of-the-Century America: Photographs from the Detroit Publishing Company, 1880-1920" (memory.loc.gov/ammem/detroit/dethome.html) and "America from the Great Depression to World War II: Photographs from the FSA-OWI 1935-1945" (/lcweb2.loc.gov/ammem/fsowhome.html). Look especially for Jack Delano, who worked in the Chicago area and traveled to the West Coast on the Santa Fe.

Historical societies, such as Wisconsin, Minnesota, and Indiana, also have railroad images throughout their online pages.

But other collections may have as much promise for railroad research. Here are a few:

California State Rail Museum Library and Collections, especially Sacramento History Online (www.sacramentohistory.org/about.html)—a project of four Sacramento County institutions to digitize and catalog more than 2,000 items about agriculture and transportation in the Sacramento region from the mid 19th to early 20th century. Partners for this project are the California State Library's California History Room, the California State Railroad Museum Library, the Sacramento Archives and Museum Collection Center, and the Sacramento Public Library's Sacramento Room. The CSRM library has a site with colorful dining car menus (66.129.110.33/) and other railroad-related meal service items.

Museum of the Rockies, Bozeman, Montana, is scanning and cataloging the Ronald F. Nixon Collection (museumoftherockies.org/photoarc/nixon/nixon-index.html). From 1916 to his death in 1989, Ron V. Nixon took more than 20,000 photographs. The collection also contains records, correspondence and historical writings that span the steam, diesel, and electric eras of western railroads. The museum had entered 5,621 images and data records as July 21. Nixon's career and photographic collection spans several states and Canada. His first published photograph appeared in Railway Age magazine in 1930, and later in other magazines, newspapers, rail company posters, advertisements, and calendars. He retired in 1975 as manager and wire chief for the Northern Pacific Relay Division in Missoula, Montana.

At Lake Forest College ,in Illinois, the Donnelley and Lee Library lists photos (www.lib.lfc.edu/special/railroad/railroad-photos.html), mostly from the 19th century, in the Munson Paddock Collection, plus North Shore Line images. The library is named for Elliott Donnelley (1904-1975), a notable railroad enthusiast, modeler, preservationist, and book collector.

The Cleveland Memory Project (www.clevelandmemory.org/) at Cleveland State University Library has several railroad sites. While most of the library's material is unprocessed, preliminary work is underway on the Nickel Plate (web.ulib.csuohio.edu/SpecColl/nkprr.htm) and the Newburgh & South Shore (web.ulib.csuohio.edu/SpecColl/nss/) collections. But searching Cleveland Memory turns up railroad images; for example, "Nickel Plate Railroad Train" produces six photos in Lakewood, Ohio. The Cleveland Union Terminal Collection (www.clevelandmemory.org/cut-coll/) is the archives of the company that built the Terminal Tower, the union passenger station, office buildings, post office, and department store, plus the tracks, bridges, signals, electrical catenary structures, and yard to switch passenger trains from steam to electric power and bring them to the downtown area. This was a massive urban redevelopment project that foreshadowed the Rockefeller Center in New York; it gave Cleveland the third-tallest building in the world in 1930 and forever changed the face of Public Square and adjoining neighborhoods.

Denver Public Library's online collection (photoswest.org/) contains 50,000 images of Native Americans, pioneers, early railroads, mining, Denver, and Colorado towns. Photographers of railroads include George Beam, William H. Jackson, Louis McClure, Otto Perry, and Robert Richardson.

James J. Hill Library, St. Paul, has historic photographs (www.jjhill.org/History/photo_gallery.html) in the James J. Hill, Louis W. Hill, Reed Hyde, and L. Dorcy manuscript collections online. As part of the Hill Manuscript collection, the library houses more than 8,000 images that span a century of economic development in the American Northwest and Western Canada.

Railroad Museum of Pennsylvania, Strasburg, (www.rrmuseumpa.org/about/library/search.htm) has a pictorial catalog under development that is being released in stages for testing. Changes are being made daily, according to the museum.

The B &O Railroad Museum, Baltimore, promises online archive programs (www.borail.org/collections-locomotives.shtml) soon.

The Center for Railroad Photography & Art has several traveling exhibits and web galleries (/www.railphoto-art.org/exhibits.asp), many covered in the last Newsletter.

For an international outlook, take a look at the transport images in the photographic database presented through the 30937 Photographic Group (www.30937.co.uk/).

These are examples. While we don't expect print to become obsolete, clearly more research will move to the Internet. 

BY J. PARKER LAMB

Super Power In The Colorado Rockies

Left: C&TS K36-Class Mikado #484 ready to leave Antonito on Saturday, June 10, 2006 with R&LHS conventioneers. *J. Parker Lamb photo*

The term Super Power usually refers to the generation of high-horsepower locomotives first developed by Lima in 1925 with its 2-8-4 wheel arrangement. The design concepts embodied in that engine spawned the pinnacle of steam locomotive production that literally pulled the nation through World War II. But this terminology can also be applied to another locomotive design that modernized access to the remote reaches of the Colorado mountains. Although used by the D&RGW, these were not the behemoths that blasted up Tennessee Pass or South Boulder Canyon for decades. No, these were the sturdy Mikados such as those pulling the narrow gauge trains ridden by over 100 Society members, spouses, and guests during the 2006 Annual Meeting at Pagosa Springs.

Rio Grande's 3-foot gauge empire, begun with the Denver & Rio Grande Railroad of 1870 and its subsidiary Rio Grande Western, included over 3000 route-miles spreading southwest from Denver and westward to Salt Lake City. This area also included the nation's largest network of three-rail trackage. Standard gauging of main lines was completed in 1890, leading to corresponding shrinkage of narrow gauge routes. However, by 1950 there were still over 900 miles of 3-foot trackage anchored on the east by Salida, including the famed 600-mile circle route connecting Salida and Durango via Gunnison (Marshall Pass route) or Chama (through San Luis Valley).

With most of the early narrow gauge lines laid with 30-pound rail, motive power was limited to 4-4-0 and 4-6-0 types. By 1878 D&RG began taking delivery of larger C-class 2-8-0s for freight service, and as helpers for luxury passenger trains carrying Pullman Palace cars on overnight runs between Denver and Silverton, Leadville, and Salt Lake City. These operated during the boom times for silver and gold mining that ended with the Silver Crash of 1893. The 2-8-0s weighed about 30 tons and had tractive efforts between 8 and 9 tons but, as traffic levels increased, most freights required double heading with helpers on some grades.

In 1903 the road turned for larger engines to Baldwin, which produced 15 Mikados of the K-27 Class. Like many others from the Philadelphia builder, they used the Vauclain compound steam delivery system (although soon changed to simple operation with the addition of superheaters). The 54-ton Mikes were restricted for a number of years to the Marshall Pass line, since heavier rail was not laid into Chama until 1917 or Durango until 1922. With 40-inch drivers, outside counterweights, and large boilers, the 2-8-2's appeared to be squatting on the tracks, and thus were called Mudhens. Technically this wide-bottom design gave the engines increased stability at speed.

The next design advance for this configuration occurred with the delivery of ten K-28s from Alco in 1923. They were much faster than the earlier Mikes and were thus denoted as Sport Models. During the hectic times of World War II, seven of these engines were purchased by the government for assignment to Alaska's strategically important White Pass and Yukon Railroad. After receiving 25 of the Mikes, D&RGW realized that this configuration represented the most powerful that could be operated safely on its narrow gauge lines, and so ten K-36 engines were delivered by Baldwin in 1925. Three years later the road's Burnham shops in Denver began producing ten K-37 models by laying boilers from standard gauge Consolidations (Baldwin 1902) onto new main frames. These engines weighed 74 tons, a full 20 tons more than the first K-27's.

In 1963 the Rio Grande, after retiring the last K-27, rostered only 15 of the original 45 pioneering machines (including three remaining K-28's). The operating roster had shrunk to ten by 1978. Today the total population is around 19, with about half still in operation. The majority of these octogenarians (mostly K36's) are still hauling loads in southern Colorado, past famous landmarks, over tough grades, and beneath breathtaking scenery. Clearly their durability is a tribute to their sound design as well as a group of dedicated steam locomotive craftsmen using contemporary maintenance and repair capabilities.

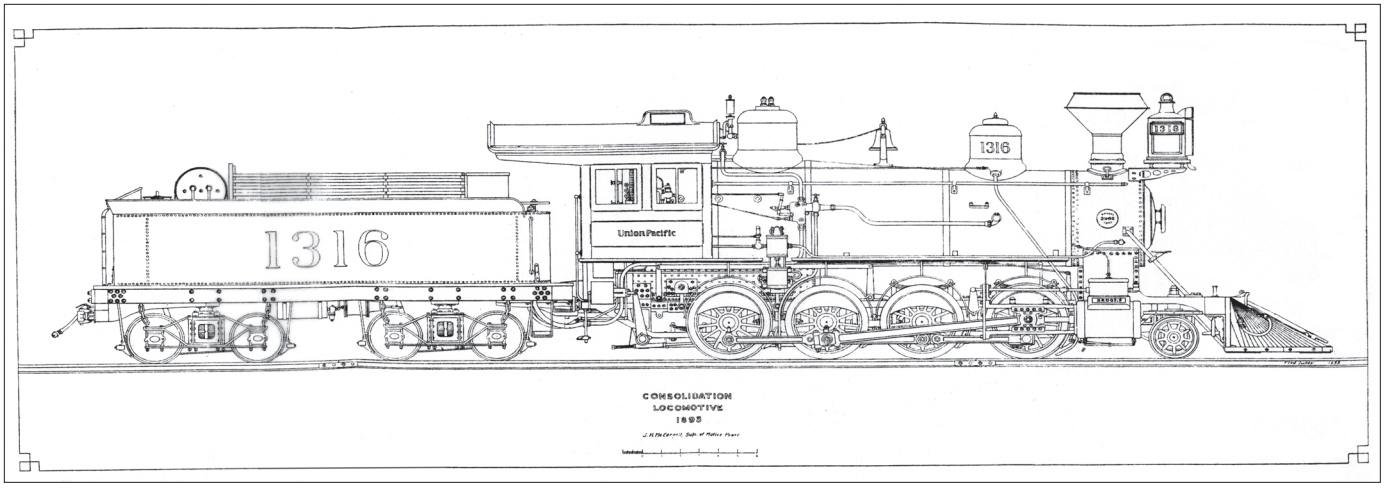
RIO GRANDE MIKADOS (3-foot gauge)

Numbers	Class	Drivers	Pressure	Weight	Tractive Effort	Builder, date	
450-464	K-27	40 inches	200 psi	54.2 tons	13.5 tons	Baldwin, 1903	
470-479	K-28	44	200	56.8	13.7	Alco, 1923	
480-489	K-36	44	195	71.9	18.1	Baldwin, 1925	
490-499	K-37	44	200	74.1	18.6	Baldwin, 1902	Burnham 1928-30

All locomotives had outside counterweights and superheaters. Source: Railroad magazine, April 1951

NOTES: Historical data for this column were excerpted from an article by one of the Society's most senior members, Cornelius W. Hauck of Cincinnati. It appeared in the 1974 volume entitled "The Collected Colorado Rail Annual," published by the Colorado Rail Museum in Golden. Hauck, one of the museum's founders and a major benefactor, became enamored with Colorado's 3-foot gauge network in the 1940s and published numerous photographs, articles, and books during the post-World War II era.

Exploring The Past With STEAMDOME



Ed. Note: This article appeared in <u>The Engineer</u> on February 14, 1896. The author is Joseph H. McConnell (1843-19__), who was Superintendent of Motive Power for the Union Pacific from 1891-1901. The article was originally delivered as a paper at the Western Railway Club. McConnell later served as manager of Alco's Pittsburgh works. Drawing above is by Fred Jukes, and appeared in R&LHS Bulletin #90. DCL

Locomotive Service

by J. H. McConnell

Twenty-five years ago a large portion of the freight and passenger traffic in the United States was handled with 16in. x 24in cylinder engines. On a few roads with heavy grades, 45-ton 10-wheel engines and 50-ton consolidation engines were used. The maximum load in a freight car was 20,000 lb., and to prevent loading cars beyond that limit a charge of double first-class was added to the excess. With an increase in freight traffic came the 28,000 lb. capacity car; this was very shortly followed by the 32,000 lb. capacity car. As new equipment was needed, the 40,000 lb. capacity car was introduced, which for a time was considered as having reached the limit for freight cars. The 50,000 lb. capacity car, then the 60,000 lb. capacity car, while to-day we see occasionally a car with a capacity of 80,000 lb. The modern refrigerator car with its load and ice weighs about 100,000 lb.

The 20,000 capacity car carried 300 bushels of grain; the modern box-car carries 1000 bushels of grain. Every part of the railroad equipment, the track and bridges, has been increased to keep up with the advance in the freight car. The same is true of the passenger equipment. With the 20,000 lb. car, we had the sleeping car weighing 60,000 lb., and considered by many people entirely too heavy for the track. It is quite common now to see coaches weighing 80,000 lb. and sleepers weighing 100,000 lb. The 56 lb. rail was followed by the 60, 67, 70, 75, 80, 90 lb. rail, and 100 lb. rail is being laid on some of the eastern roads. The locomotive, to meet the increased service, has grown from a 30-ton 8-wheel engine to a 60-ton 8- wheel engine; the 10-wheel engine from 45 tons to 70 tons, and the consolidation engine from 50 tons to 80 tons.

Notwithstanding the greater carrying capacity of the present equipment, the constant decrease in rates made by active competition causes less revenue to be derived from hauling a car containing 60,000 lb. of freight than was received in 1870 for hauling a car containing 20,000 lb. of freight. From 1870 to 1880 there was a decrease in amount of revenue per ton per mile of 48 per cent.; between 1880 and 1894 a further decrease of 50 per cent. Comparing the rate per ton per mile earned in 1870 with 1894, there has been a decrease of 74 per cent. The revenue derived from

hauling a car containing 60,000 lb. of freight in 1894 was 22 per cent less than that obtained from hauling a car containing 20,000 lb. of freight in 1870. The train expense is greater, the general expenses greater, and the entire cost of operating a railroad is greater than in 1870. A railroad of any importance that shows operating expenses less than 65 per cent of earnings is accused of failing to maintain the property. The ratio of operating expenses to earnings of six railroads running into Chicago shows the following percentages: --65.86 per cent., 68.37 per cent., 72.80 per cent., 62.35 per cent., 57 per cent., 74.59 per cent.

Work done by locomotives. --The question is often asked if the modern locomotive moves as much tonnage in proportion as the smaller engine did twenty-five years ago. Old engineers frequently remark that the engines of today do not do the work in proportion to their size that the smaller ones did twenty-five years ago. Facts show that we are getting better work with the modern engine. Every condition is more favourable to the modern engine; we have greater weight on driving wheels, larger heating surface and increased steam pressure. Some records show a consolidation engine built in 1870 to have had 20in. by 24in., cylinders, a total weight of engine of 100,000 lb., with 85,000 lb on driving wheels, 1500ft. heating surface in the boiler, and 140lb. steam. A consolidation engine built in 1895 shows a great difference in everything except the cylinders, which are the same. The total weight of the engine is now 150,000 lb., weight on drivers 137,000 lb., heating surface in boiler 2200ft., steam pressure 180 lb. The engine of 1870 hauled 24 loads weighing 528 tons, while the 1895 engine hauled a train of 35 loads weighing 1120 tons over the same division. The increase in passenger service is almost as marked. Twenty-five years ago, with a time schedule of 22 miles an hour, it would have been considered an impossibility to make an engine haul ten cars on a schedule of 40 miles an hour, yet it is now done every day, and these engines maintain a speed of 55 miles per hour between stations with ten cars. Have we reached the limit with the modern engine, and have we determined how much a locomotive can be made to earn for the company?

Tonnage rates. --The question should only be considered from one standpoint, that is, how much can we make the engine earn? To accomplish this -- that is make it earn all it can -- the idea must be given up that an engine should run from 75,000 to 100,000 miles before it is taken in the shop. When freight engines are kept in service until they have made that mileage, the company is not getting the revenue the engines could earn. An engine in freight service should haul every ton of freight it is capable of doing, regardless of cost for repairs and fuel. When the performance is considered on a mileage basis, or with reference to how cheap it can be run, and how many miles it will make between general repairs, there will be frequent complaints made by the mechanical department of overloading, and an effort will be made to have the train reduced in order to favour the engine, so there can be a better average made on repairs and coal. After four years experience with tonnage rating on grades ranging from 40ft. to 96ft. to the mile, it has resulted in a general increase in average number of cars per train. Where 22 loads was a train over some of the heavy grades, by the tonnage system frequently 26 cars are hauled with the same engine that hauled 22 cars for a full train. In another case, where 28 cars was a full train, a tonnage rating has increased the train to 35 loads with the same engine. It was supposed that 28 loads was a full train, and trainmen were of the opinion that the engine could not pull 35 loads, but after several tests it was demonstrated that the engine was capable of doing this, and no further trouble was experienced in hauling a train of 1100 tons.

When we consider the service of a locomotive from the standpoint of what it can earn, and not what it costs per mile to run it, we will then begin to increase the number of freight cars per train and arrive at the question affecting the revenue of the company, and that is, the cost of hauling a loaded car per mile or cost of hauling a ton of freight one mile. There are very few roads in the West on which the train haul could not be increased on some of the districts. An increase of one car containing 20 tons of freight in each train will increase the earnings of a locomotive in one year 7200 dols., and the only additional expense would be 90 tons of coal. Taking the average of a locomotive at 3000 miles per month, or 36,000 miles per year, we have the revenue of 20 tons of freight hauled the same mileage at one cent per ton per mile, or 20 cents per mile per car. There has been no increase in the wages of the engineer, firemen, or trainmen, or for repairs. The only extra expense has ben 5 lb. of coal per train mile. Taking the average tonnage per car for the year on six Western roads, which is 11.44 tons per car, the locomotive can earn on this basis 4118.40 dols. per year for the company more than it did before. By keeping the engine in first class condition at all times, I believe every locomotive in freight service on our Western roads can be made to earn at least 4000 dols. more for the company per year than at present; and the expense will not be increased except for fuel at the average rate of five pounds of coal per car mile.

Reports of performance and cost. --The monthly statements of locomotive performance sent out by railroads, when compared, show a wide difference in cost, and unless the conditions of making them up are known, the

comparisons are unsatisfactory. Some roads allow engines only actual mileage between terminals, regardless of length of time making the trip. Should the train be delayed several hours by switching or meeting trains, no mileage is allowed. In helping service the engine is only credited with actual mileage. While the crew will receive a day's pay, the engine may make but thirty miles in twelve hours.

It is the practice of a number of roads to allow constructive mileage to all engines in passenger and freight service. Some roads add 10 per cent to the mileage, as it is claimed to make up for the coal and oil used in taking the engines from the roundhouse to the train and in leaving the train and being put in the roundhouse. In addition to this they are allowed ten miles per hour for switching or lay-outs on the road. Where overtime is paid for the engineer, the engine is given mileage to make up for it. By this system of watering mileage a locomotive report is made to show a good average on coal and oil and low cost for repairs and a large individual engine mileage, when the actual cost is 10 per cent to 15 per cent greater than that shown by the report.

Taking the annual reports of some Western roads, considering the freight engine mileage with freight car mileage, they show the following percentages of freight engine mileage to freight car mileage: --

4.06 per cent	4.24 per cent
4.76 "	5.35 "
4.37 "	5.32 "

The combined mileage of passenger and freight trains compared with the engine mileage in same service shows following percentages of engine to car mileage: --

8.78 per cent	7.76 per cent
7.57 per cent	11.29 per cent
7.44 per cent	6.48 per cent

The following gives number of cars per train when figured on the same basis for all the roads: --

18.80	20.09
18.66	17.73
23.60	24.66
22.86	

There is no uniformity in rating trains. One road rates two empties as one load, others three empties two loads, and others five empties three loads. A train of 10 loads and 20 empties under these systems would be called respectively 20 loads, 22 loads, and 24 loads. But the showing on paper would convey the impression that one road was hauling a greater number of cars per train than another, when there is a probability that the road showing the smaller train was moving the same tonnage.

Following the matter still further, the average tonnage for a loaded car for the year on the five roads shows:--

12.87 tons	14.40 tons
9.09 tons	12.26 tons
9.84 tons	

With such a variation in the manner of allowing mileage and rating trains, no satisfactory comparison can be made, and until all roads show the cost of moving a loaded passenger and freight car one mile, locomotive performance sheets will be of little value for comparision.

How to increase revenue. -- The problem of to-day with decreased rates is to haul greater tonnage in each car and reduce the cost of doing it. The revenue of a railroad is derived from the service rendered by its locomotives. To increase the revenue the locomotives must do more work. The tendency is to increase their weight and size, and there is not enough attention paid to getting increased service of those now owned. The freight earnings largely exceed the passenger earnings, and by directing efforts to hauling increased tonnage the revenue is increased without any great increase in operating expenses. The weight of a train over a division is usually determined by the amount of tonnage an engine can haul over certain grades. In nearly every case increased tonnage can be hauled if the mechanical and transportation departments work together. An increase in the steam pressure of 5 lb. will, in many cases, take one more car over the grade.

When the mechanical departments of our railroads give the same attention to increasing the train haul that they do to making a showing of how cheap they can run the locomotives per mile, they will find they have obtained increased service from the locomotive, decreased the cost of hauling a ton of freight, and increased the revenue of the company. The problem of to-day is, how much does it cost to haul a ton of freight one mile, not what it costs per mile to run your locomotives.

Archives Services - II

William F. Howes, Jr,

Ed. Note: *This is the second in a series of articles on the Railway & Locomotive Historical Society's offerings from its Archives Services, and focuses on back issues of* ***The Bulletin*** *and* ***Railroad History****. The first installment appeared in the Winter 2006 issue, and focused on available Locomotive Rosters and Records of Builders Construction Numbers. Both articles have been prepared by Bill Howes, a Society director and past president, who also serves as Chairman of the Southeast Chapter, and manages the Archives Services for the Society. DCL*

One of the most popular and valuable services of the Society for its members and other students of railroad history is ready access to the wealth of material that has been published in ***The Bulletin*** and ***Railroad History*** over the last 85 years. A comprehensive "Index" for the journals can be found at our website www.rlhs.org or, for the years 1921-1984 (issues 1 through 151), in a printed version compiled by Thomas T. Taber III and available for $12.50 from R&LHS Archives Services.

The "Index" is organized by "Author", "Subject" and "Book Reviews". "Subjects" are further grouped by geography; namely, United States, Canada and Railways Worldwide. There is also a "Subject" listing of the names of individuals featured in biographical sketches. The "Book Reviews" are categorized and indexed by topic, biographical subject, railroads in the United States, railroads associated with particular states, railroads in Canada, locomotives (U.S.), and electric and cable railways (U.S.).

Many issues of the journal going back to No. 139 (Autumn 1978) are still available from R&LHS Archives Services. Normally retailed to the general public at $12.50 per copy, Society members enjoy a heavily discounted price of $7.50. Postage and handing is included in this price except when mailing is to an address outside the United States; then an additional $2.50 per copy is charged. The Society's website maintains a current list of available back issues. You may also obtain a free copy of this list from R&LHS Archives Services. Occasionally, the Society obtains an out-of-print issue of the journal for which it has no need. These are generally made available to members at prices ranging between $20.00 and $40.00. Although a list of such issues is not published, you may advise Archives Services of any particular issue you are seeking and we will notify you if and when it becomes available.

We also can provide photocopies of articles from virtually any back issue of ***The Bulletin/Railroad History***. Members pay just 20 cents per page, versus 30 cents for nonmembers. There is a minimum charge of $5.00 per order. Discounts are available on orders in excess of 200 pages.

Whether you are trying to enlarge your collection of ***The Bulletin/Railroad History*** or are seeking articles on a specific subject, Archives Services can help.

Chapter Reports

New York Chicago Golden Spike Lackawanna Pacific Coast
Southern California Southwest Southeast

Southern California Chapter Plans Excursion Pacific Southwest Railroad Museum

The Southern California Chapter is planning an excursion to the Pacific Southwest Railroad Museum in Campo on Saturday, October 14th. The chapter members will travel by luxury bus from Pasadena, leaving at 8:00 am, and arrive at the museum in Campo around lunch time. After lunch, they will board two special cars: Robert Perry, a Pullman four-bedroom private car, and Santa Fe 1509, a diner-lunge-observation car that Ed Cheetham and Dick Ritterband owned before it went to the museum for their "Miller Creek Trip". After the trip the round trip to Miller Creek, there will be time to explore the museum. Among the door prizes for the trip will be a drawing for eight cab rides, as well as for books and videos that are duplicates in the chapter's collection.

The chapter also participated in the annual Fullerton Railroad Days on May 6th and 7th. The booth featured posters of the Union Pacific "Big Boy" 4014, and their souvenir brochure with information on their collection, some t-shirts and duplicate timetables. Sales of material for the two days were over $300. The chapter also signed up new members and gave out information on membership to other visitors.

The Los Angeles County Fair will open on September 8, and the chapter will have an exhibit there as well, as it does every year. Their display will be open every day during the Fair, which runs through October 1.

Trading Post

For Sale: ***Burlington Northern Adventures: Railroading in the Days of the Caboose*** (2004, South Platte Press), a collection of true short stories about R&LHS member William Brotherton's days as a brakeman, conductor and trainmaster. Starting with his days of hopping Southern Railway freights as a kid in Atlanta, the book takes you through his career as a boomer brakeman working freights throughout North Dakota, South Dakota, Wyoming, Minnesota and Nebraska, ending as a trainmaster for the Colorado & Southern in Denver. An attorney in Texas today, Brotherton writes in a humorous style and is a frequent contributor to ***Trains*** Magazine; his last story was in August 2005, entitled "Grand Forks: 25 Years Later". To order the book (autographed free for R&LHS members), send $24.95 (includes S&H) to William Brotherton, 2340 FM 407, Suite 200, Highland Village, TX 75077 or order online at www.bnrailstories.com.

Call to Action! Thousands of railcars including both new and historic fallen flags have been vandalized with graffiti over the past decade. Help stop this crime. Report any suspicious trespassing to the railroad or local police. NS 800-453-2530, CSX 800-232-0144, UP 888-877-7267, BNSF 800-832-5452, CN 800-465-9239, CP 800-716-9132, KCS 877-527-9464.

For Sale:
D&H Annual Reports -- 1942, 1943, 1944, 1945, 1946, 1949, 1951, 1953 -- $6.00 each postpaid.
1947 -- $8.00 postpaid.
1961, 1962, 1963, 1965, 1966, 1967 -- $5.00 each postpaid.
All the above reports together -- $65.00, postpaid.
Atlas HO scale locomotives -- barely used

U-33-c	Model 8542	NJDOT	Road #3364
U-33-c	Model 8548	NJDOT	Road #3371
U-33-c	Model 8544	Guilford (D&H)	Road #650
U-33-c	Model 8500	undec	
U-33-c	Model 8500	undec	

$45.00 each postpaid, insurance extra
$200.00 for all five, postpaid, insurance extra
GEM B&M R1-d 4-8-2 used $300.00 postpaid, ins. extra
AHM B&M R1-d 4-8-2 used $200.00 postpaid, ins. extra
AHM loco has no smoke deflectors
Both above 4-8-2 locomotives plus Bowser B&M steam era caboose $450.00 postpaid, insurance extra
Photos of the above models are available via email.
Peter H. Grant
910/270-1579
phgrant@aol.com

For Sale: Bulletin #120, Railroad History #158, #170 through 185 plus Railroad History Millennium Special. I also have some material from the 50-year banquet. Clair L. Foster - 410-480-4777 evenings.

For Sale: Railroad Switch Lamps.
1. Switch lamp bell bottom fork tube, mounts on fork on tip of the switch stand target mast. Has four 5 3/8 convex optical lenses, two greens and two reds. The top cap has in raised letters "The ADLAKDE non-sweating lamp, Chicago." Top of fount has "The Adams & Westlake Company, use kerosene oil only." Has round wick burner with Pyrex glass chimney. Lamp chimney has brass catch, lamp top has cast brass turn knob release.
2. Adlake model 1112 1/2 switch lamp mounts direct on to target rod tip with an adopter and spring up inside cast from base. Has four 4 1/2 glass optical lenses, two ambers and two greens and two yellow 10" day targets. Everything else about the same as number one. Also has snow hoods with green lenses.
3. Old switch lamp fork tube mount has malleable iron base ring riveted & soldered to bottom of the lamp body and has "Santa Fe" in raised letters. Four lenses, two greens 4 1/8", two ambers 4 1/2", all with snow hoods. Fork tubes retainer is hinged brass casting, has seven day fount 1/4" x 8" round wick burner with Pyrex glass chimney. There is a brass serial number plate with S1 8213 near top of lamp body. Has ornate 1" x 3" brass plate on side of the round chimney, top of lamp body. It has raised in letters "The Adams & Westlake Company. Pat. June 8&29. 1886. Oct. 20. 1888. Oct. 1. 1895 Nov. 5 1895 June 12. 1902. Chimney has cast brass hinge and brass spring catch. Has round cap with raised letters that say "The Non-sweating ADLAKE lamp Chicago." Lamp sits on fork on a switch stand target rod tip that is into a wood base.
4. Same model as number 2 has two 5 3/8" amber lenses with yellow day targets. Two 4 1/2" cobalt blue lenses with white day targets. Day targets are 10".
5. Same body as numbers 2 & 4 but with two 5 3/8" amber lenses with yellow day targets, two 5 3/8" green lenses with white day targets. Has extra long wick raiser because of all day targets being 10".
6. Marker lamp raised letters on cap, "DRESSEL Arlington N.J. U.S.A. Has four 5 3/8" lenses three greens and one red, has "C.B.&Q. just under the red lens. There is a slide up door to remove fount for refilling. The fount has "Dressel Arlington, N.J. Has a two-piece malleable iron mount bracket.
For pictures and other information, contact Dick Rogers, P.O. Box 593, Mira Loma, California 91752. Ph.: 951-360-8565.

The Railway & Locomotive Historical Society ***Mission Statement***

The mission of the Railway & Locomotive Historical Society, Inc., is to collect, interpret, preserve, educate and disseminate information relating to railroad history. The Society's mission will be achieved by:

1. *Publishing* Railroad History *and maintaining its status as the premier publication in the field.*
2. *Recognizing and encouraging scholarship in railroad history and other endeavors, such as the Society awards program.*
3. *Preserving historic documents, photographs and other materials, and providing access through national and chapter activities.*
4. *Maintaining communication among members of the Society through printed and/or electronic means.*
5. *Providing fellowship, education, and effective governance of the Society through the annual convention and membership meeting*
6. *Furthering knowledge of railroad history by publication of significant historical studies and reference works.*
7. *Encouraging appreciation of railroad history, and providing social enrichment opportunities through chapters and special interest groups.*
8. *Encouraging members to actively participate in the process of researching, recording, and disseminating railroad history by providing research guidance.*
9. *Promoting the significance of railroad history in schools and related organizations such as historical societies.*

The Railway & Locomotive Historical Society, Inc.
P.O. Box 292927
Sacramento, CA 95829-2927

www.rlhs.org

Prsrt Std
US Postage
PAID
Permit 3259
Atlanta, Georgia

DATED MATERIAL

ADDRESS SERVICE REQUESTED