Carolina Conductor

Volume 2, Number 8 **Monthly Newsletter of the Carolina Railroad Heritage Association, Inc.** August 2015

Preserving the Past.
Active in the Present.
Planning for the Future.

Meeting Site:
Woodmen of the World Bldg.
721 East Poinsett Street
Greer, SC 29651-6404
Third Friday of the Month at 7:00 pm

Hub City Railroad Museum and SOU Caboose #X3115:
Magnolia Street Station
298 Magnolia Street
Spartanburg, SC 29301-2330

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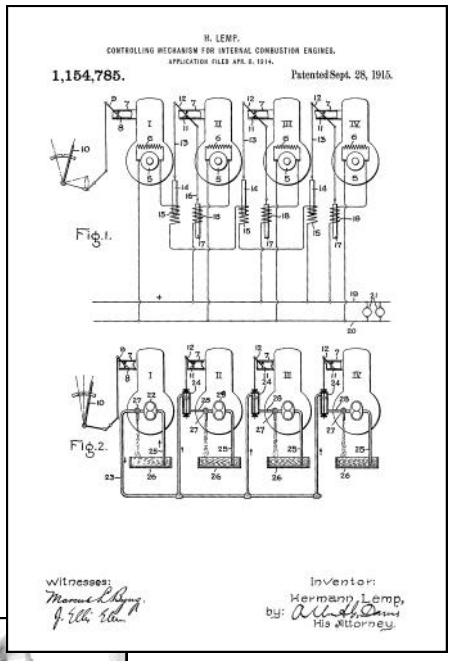
Newsletter submissions due by 2nd Friday of the month.

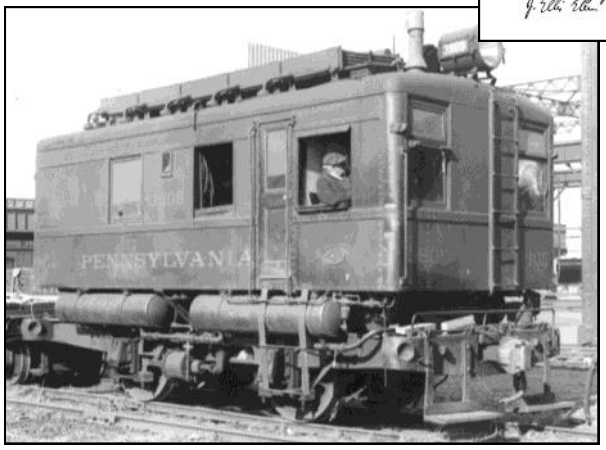
Early American Diesel Developments

by Bruce Gathman

Adolphus Busch purchased the American manufacturing rights for the diesel engine in 1898 but never applied this new form of power to transportation. Only limited success was achieved in the early twentieth century with direct-driven gasoline and diesel powered railcars.

General Electric (GE) entered the railcar market in the early twentieth century, as Thomas Edison possessed a patent on the electric locomotive, his design actually being a type of electrically propelled railcar. GE built its first electric locomotive prototype in 1895. However, high electrification costs caused GE to turn its attention to diesel power to provide electricity for electric railcars. Problems related to co-coordinating the diesel engine and electric motor were immediately encountered, primarily due to limitations of the Ward Leonard electric elevator drive system that had been chosen.


H. LEMP.
CONTROLLING MECHANISM FOR INTERNAL COMBUSTION ENGINES.
APPLICATION FILED APR. 8, 1914.
1,154,785. Patented Sept. 28, 1915.
Fig. 1.
Fig. 2.
Witnesses:
Inventor:
Hermann Lemp,
by: His Attorney.



A significant breakthrough occurred in 1914 when Hermann Lemp, a GE electrical engineer, developed and patented a reliable direct current electrical control system. Lemp's design used a single lever to control both engine and generator in a coordinated fashion, and was the prototype for all

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Arrivals

CRHA—NRHS– RHA Joint Picnic

By Dave Winans

On August 8th 15 members of the CRHA joined the Watauga Valley, Asheville and Greenville NRHS Chapters at the Craggy Mountain Railroad in Asheville for a picnic.

Jim Hopkins brought the Greenville chapter's crew motor car and Mack McMillan brought his inspection motor car. At least 4 other motor cars were at the event, making for lots of motor car rides on the line. Thanks to the generosity of Rocky Hollifield we were able to ride the complete line, from the Craggy Mountain RR shops to the end of the line where NS still operates.

Much of the day was spend in the Woodfin Park on the French Broad River picnic shelter. Approximately 75 members and guests from the 3 chapters enjoyed a lunch of grilled hamburgers, bratwurst and hot dogs. Many folks brought dishes to share including salads, mac and cheese, and three different peach cobblers. Cakes and cookies were also plentiful. The weather was great and no one went away hungry.

Al Weber, current NRHS president, was in attendance and gave a short talk about the value of the NRHS and encouraged folks to join. He also fielded questions about the financial status of the organization. He responded by stating that it took 10 years for the organization to get into the hole it is in and it will take some time to get themselves out of debt. Currently his main focus is not to spend money that the NRHS does not have.

After some more rides on the motor cars and watching two NS trains run up and down the line on the other side of the river, the groups went their many ways home, having had an enjoyable time at the Craggy Mountain Railroad. Thank you to RHA Secretary Katie Phelps for organizing and including us in the event.

DC to AC Traction

NS #8879 is the first NS GE Dash 9-40C to be converted from DC to AC traction and rebuilt with a new GE wide nose and cab. These rebuilds are being done as a General Electric project, but the work on the #8879 was sub-

contracted out to and completed by American Motive Power, Inc. (AMP) in Dansville, NY. A second unit, NS #8799, is also at AMP for rebuilding. The first NS Dash 9-44CW to be converted from DC to AC traction, NS #8900, is at CAF USA in Elmira, NY, being upgraded. The #8879 will be repainted by NS at Altoona.

Departures

#611 a "J" Summer

By Steven Ashley

On Saturday July 4, 2015 I had the opportunity to ride behind Norfolk & Western Class "J" steam locomotive #611 on a 21st Century Steam excursion over the former N&W right-of-way between Roanoke and Walton, VA. This was the third time I had seen the #611 in 2015.

The first encounter came on May 28 when I attended a photo charter at the North Carolina Transportation Museum in Spencer, NC. The #611 had been at Spencer over the last year during it's restoration to operation for excursion service.

My second encounter with the #611 came on June 20 when I rode in former N&W caboose #518675 at the

NCTM during their annual Rail Days event. During this weekend, in addition to the #611 pulling the caboose, N&W GP9 #620 pulled the museum's passenger train and Southern FP7 #6133 powered a five car caboose train.

My third meeting with #611 was after it had pulled a trip to Lynchburg, Virginia earlier in the day. The afternoon excursion to Walton was the fourth out of six trips during the weekend of July 3-5. Prior to boarding the train at the O. Winston Link Museum, which is housed in the former N&W passenger station in Roanoke I had visited the Virginia Museum of Transportation, which is the owner of the #611 as well as former NS steam star N&W "A" class 2-6-6-4 #1218. A temporary visitor to Roanoke, which had called the city it's home from 1942 to 1958, was the former N&W "Y6a" class 2-8-8-2 #2156 which has been loaned to the VMT for five years by its owner the National Museum of Transportation in St. Louis, MO.

I boarded car number 5, the NS #44 *Florida*, prior to the scheduled departure. The #611 departed Roanoke headed westbound on schedule at 1:30 on the dot. During the 42-mile trip to Walton the train passed through several towns notable to many historians of the N&W. Salem was the first town encountered after leaving Roanoke, followed by Christiansburg and Vicker where the train passed under the former N&W coal tipple that had serviced many locomotives during the steam era.

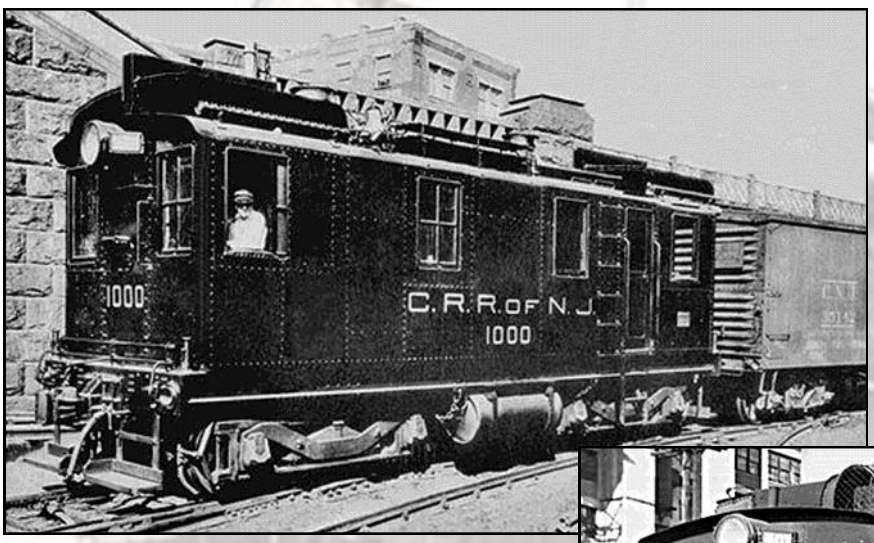
Upon arriving at Walton the train turned around on the wye and returned to Roanoke arriving at 5:00 pm approximately 30 minutes ahead of schedule. Although the trip was enjoyable, there were several noticeable differences obvious to anyone who had ridden the previous incarnation of the Norfolk Southern steam program. Due to liability issues open vestibule doors are no longer permitted on Norfolk Southern steam excursions. As a result, I could only barely hear #611's whistle during the trip even though I was relatively close to the locomotive. Furthermore due to the amount of traffic on the Norfolk Southern's mainline photo run-bys were absent on this excursion, which is one reason I am glad I attended the photo charter on May 28 in Spencer.

Upon arriving back at Roanoke I disembarked the train and met my parents who had remained at the VMT during my excursion and had dinner at the Great #611 Steak Company in Roanoke. This family-style steakhouse was decorated with many railroadiana items, most relating to the N&W Railway.

The #611's 2015 excursion season is now complete and officials with the Fire Up 611 campaign, Norfolk Southern and the Virginia Museum of Transportation are currently reviewing surveys distributed to passengers on the weekend's excursions to determine destinations for the 2016 excursion season.

Rare Mileage

Early American Diesel Models



Central Railroad of New Jersey #1000 at the Bronx Terminal Yard on November 2, 1925. GE Class B-B-120/120-0-4, a 60T loco. GE image, #1 end, "B" side.

Long Island Railroad #401 a 100T locomotive. Ingersoll-Rand marketed the AGEIR locomotives in three categories. A 60 ton 300 horsepower design, 100 ton 600 horsepower version, and a 108 ton 750 horsepower unit. All three were offered in both a "Switching Service" and "Road Service" version with only a change in gear ratio to distinguish between them.

70 ton Westinghouse Visibility Cab 400 hp Beardmore diesel. CLC 1861 5/1929 It was sent to Canadian Westinghouse in Hamilton for electrical work and delivered to CNR 5/17/1930.

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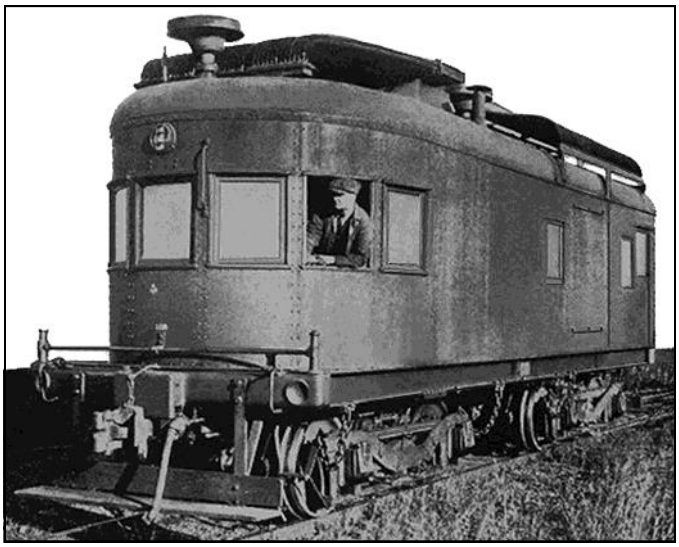
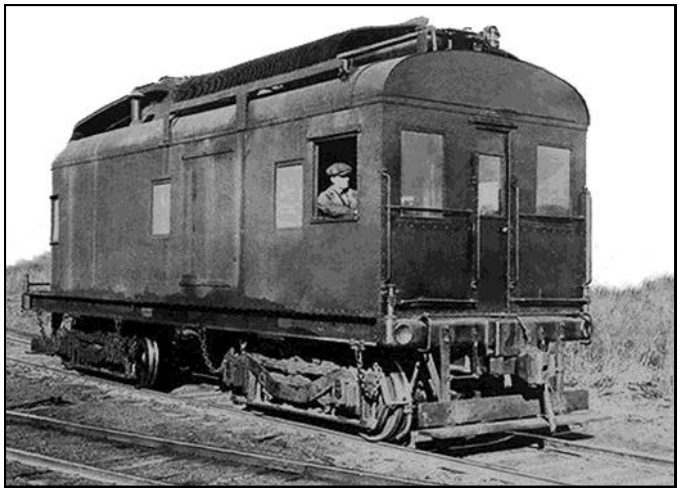
Artist concept of early demonstrator AG-IR diesel.

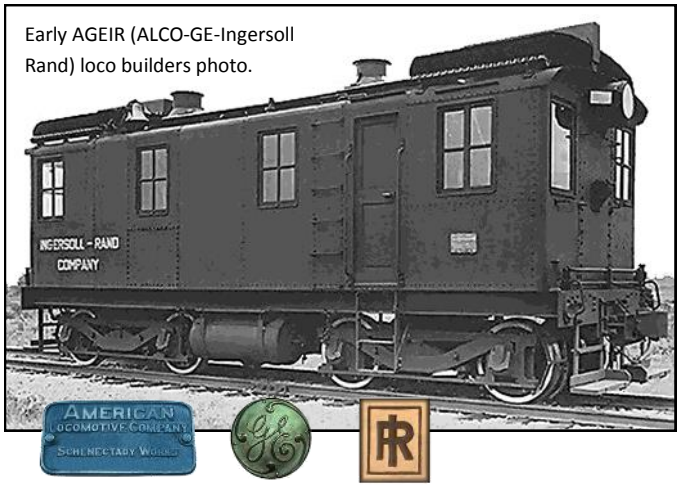


Early GE-IR diesel, above is the front view - below is the rear view. Parts from earlier prototypes were used in the construction.



diesel-electric locomotive control systems.

In 1917–18, GE produced three experimental diesel-electric locomotives using Lemp's control design, the first known to be built in the United States. Following this development the 1923 Kaufman Act banned steam locomotives from New York City because of severe pollution problems. The response to this law was to electrify high-traffic rail lines. However, electrification was uneconomical to apply to lower-traffic areas.



Early AGEIR (ALCO-GE-Ingersoll Rand) loco builders photo.

The first regular use of diesel-electric locomotives was in switching applications. General Electric produced several small switching locomotives in the 1930s.

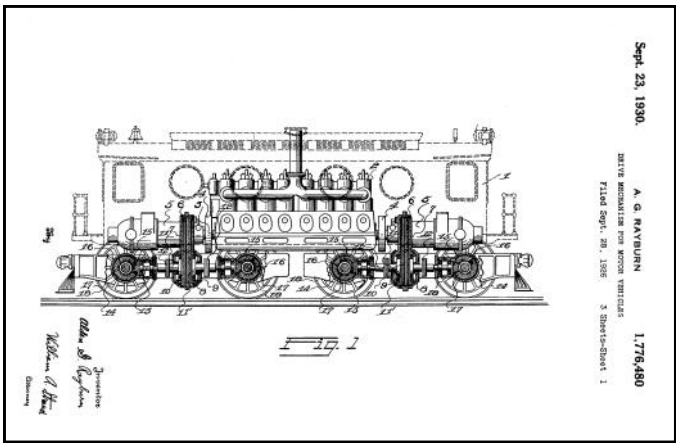
Westinghouse Electric and Baldwin collaborated to build switching locomotives starting in 1929. However, the Great Depression curtailed demand for Westinghouse's electrical equipment, and they stopped building locomotives internally, opting to supply electrical parts instead.

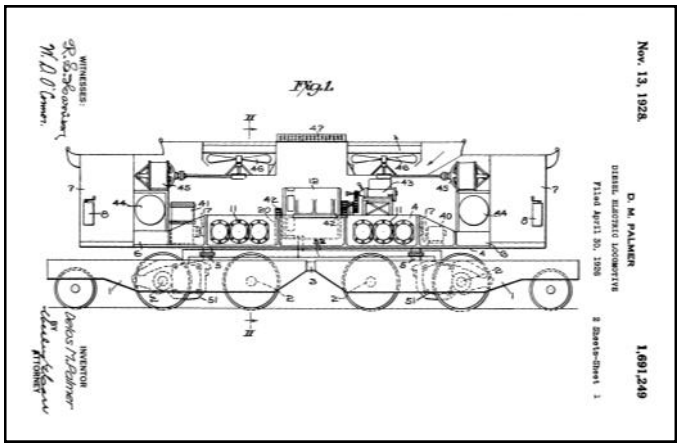
Early Baldwin Westinghouse diesel loco photo.

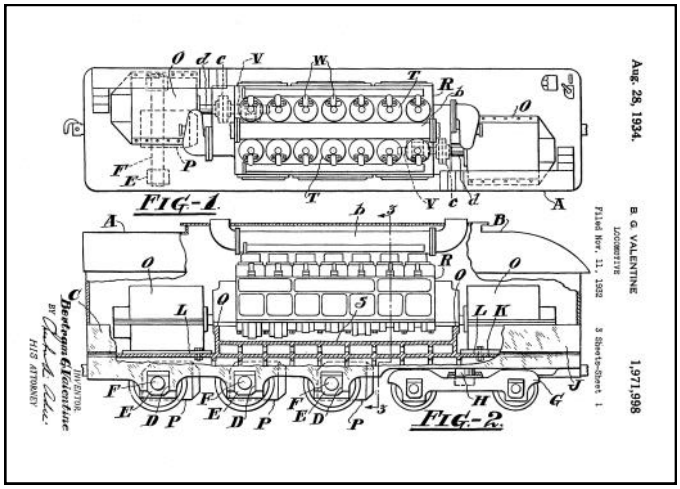
Marker Lights

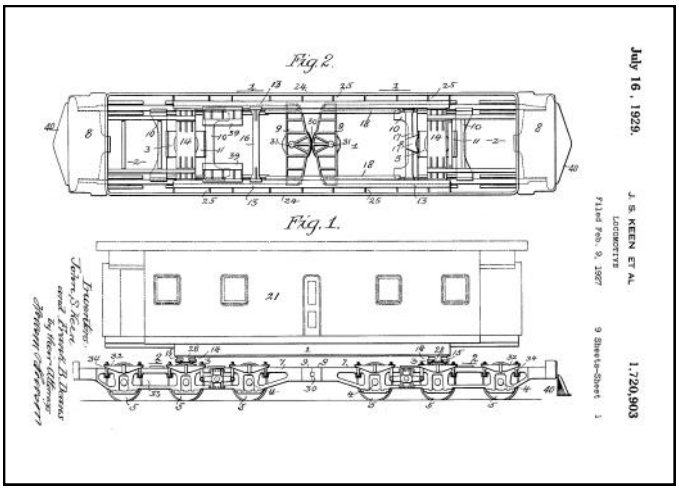
Diesel Patents of the 1920s and 1930s

This is just a sampling of design ideas expressed through patents in the early days of dieselization. Go to Google Patents and search for these patent numbers for more complete information and to find additional patents.









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