The LVRR

Published by the Ligonier Valley Railroad Association for the Friends of the LVRR

September 2013 Volume 9 - Issue 3

The Ligonier Valley Rail Road Museum Ball Signal

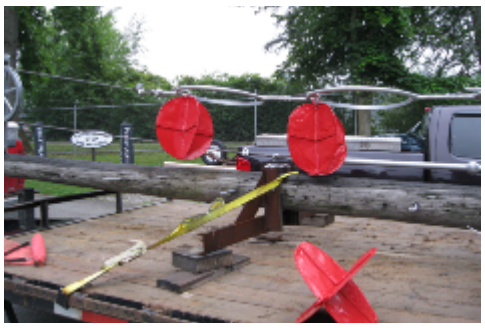
On Sunday, August 4th, 2013, we completed installation of our restored, antique, railroad ball signal at the Museum. The signal was acquired in 1953 by Bill Smith of Latrobe, PA. Bill was an avid collector of all things railroad and he paid to have it removed from Wells River, Vermont, and transported to Latrobe. Once at Latrobe he had Bell Telephone install the pole and the signal was rigged by Chuck Caldwell on July 29, 1956. It stood in his yard until we acquired it in 2005. We had it moved from Latrobe to Laughlintown for storage at Ligonier Construction, then moved from Laughlintown to the Museum grounds in 2010. When we purchased the signal it was in need of some restoration. The cylinder was rusting out and the cable needed work. Fortunately the McFeely-Rogers Foundation in Latrobe provided grant money to start the restoration and this money was later augmented by The Ligonier Endowment. We had the signal moved to Weimers Blacksmith Shop in Somerset for the restoration. The cylinder was re-rolled and powder coated and the cable was replaced. Ligonier Construction hauled the signal back from Somerset and erected it on the Museum property. The signal is now operational.

A Brief History:

Railroad signals have been a requirement since the earliest days of the industry. One of the earliest fixed railroad signals was the ball signal. In its simplest form, it consisted of a mast with an arrangement of ropes and pulleys by means of which a circular globe, or "ball," could be raised or lowered. From a distance, these signals looked like balls, and they became known by that name. When employed as a train controlling signal, the ball raised to the upper position at the top of the pole was called a "highball" and signified a "go ahead," or clear track condition. Ball signals were the inspiration for the term "highball," meaning all clear to depart or a clear track ahead, a term still in the vernacular of today's railroaders. When lowered to the bottom of the pole, the indicator was called a "lowball" and meant "stop." At night, a lantern might be substituted for the ball to provide a visual signal indication.

Despite their simplicity, or perhaps because of it, ball signals engendered a large measure of confidence on the part of operating personnel. In 1874, when several other signal forms were available and in use, the *Railroad Gazette* recorded the words of an Erie engineer who found ball signals to be virtually foolproof, except in foggy weather. This engineer declared that, "I have once in about ten years running had to send my fireman ahead to climb the pole to make sure the ball was not up."

The first recorded use of signals to control train movements in the U.S. was in 1832 on the New Castle & Frenchtown Railroad on its 17-mile line in Delaware and Maryland. The NC&F's signals were bell-shaped peach baskets suspended by pulleys from poles about 30 feet high, placed at each station and at intervals of about 3 miles.



Over time, the ball signal was refined and improved. Later versions consisted of a tall pole with pulleys at the top and bottom, over which was strung a continuous chain. Ball signals were often at locations requiring more than one indication, so several wire loops would be installed in the chain to accommodate additional balls. At night, the balls would be removed and be replaced by lanterns. The chain could then be pulled to raise or lower the position of the attached balls or lanterns as needed. Attached to the pole near the top was a cylindrical enclosure into which the balls could be lowered and thus concealed from view so as to display the desired aspect.

The number of balls or lanterns visible above the enclosure indicated what train movements would be allowed. Not

only were the first “peach basket” balls not spheres, later versions generally weren’t, either. Usually, they were fabricated from sheet metal. Some were shaped like a can; others were circular pieces of metal fastened together at right angles to simulate a ball when seen from a distance.

Some ball signals were modernized by adding electric light fixtures with red globes mounted permanently to the upper portion of the pole. These could then be individually lighted at night, eliminating the need to exchange lanterns for balls on the chain. Unlike other signal types, ball signals could be read from nearly any angle, making them useful as guardians of junctions or level crossings.

Ball signals were labor-intensive. Employees had to be on duty 24 hours a day at the site, making the signals targets for managements looking to reduce labor costs. After World War II they were being phased out. Most were replaced by Centralized Traffic Control, or their need was eliminated by operational changes.

Despite their obsolescence, several examples of these devices still were operating in the mid-1950’s in Vermont, where, thanks to frugality and tradition, old ways have always died hard. The Boston & Maine (B&M) had three on its Connecticut River Subdivision; Central Vermont had four in the St. Albans area; and the Rutland had one each at North Bennington and Rutland, as well as sharing the one at Bellows Falls with the B&M.

At each location, a variety of aspects would be required, based on what had to be accomplished dictated by track configuration and train movements. (The aspect is the visual appearance of the signal). This was achieved by developing a code for each movement based on the number of balls or red lights visible. Only that move which was indicated could be undertaken while that configuration of balls or lights were displayed, thereby eliminating confrontations at the crossing—hopefully.(The very last operating ball signal in the U.S. is at Whitefield, N.H., 5 miles from the Vermont state line. It protects the crossing of former Boston & Maine and Maine Central lines.

In Vermont the ball signals were used at grade level crossings with other railway lines, sometimes described as “diamond crossings,” to indicate which train had the right to cross. With the simplest indications, a raised ball indicated proceed, and a lowered ball meant stop. At locations featuring complex junctions, as was the case at Wells River, ball signals could be used to display more complex indications by hoisting multiple balls. The signals at Wells River were interpreted as follows:

One ball/red light - Barre & Chelsea trains or engines may use north wye track to Woodsville.
Two balls/red lights - Canadian Pacific mainline trains or engines may use north wye track to Woodsville.
Three balls/red lights - Trains or engines from Woodsville may use north leg of wye track.
Four balls/red lights - All trains or engines may use south wye track in a southerly direction.
Five balls/red lights - All trains or engines may use south wye track in a northerly direction.
Source: *B&M Employees Timetable, April 30, 1950*

When the signal was in use at Wells River it was mounted relatively high above the tracks for visibility in all directions. The signal at that time also had a row of five lights for nighttime use. The LVRR Museum signal is only 36 feet tall. We know this is the Wells River signal because we have the provenance. Below, the signal as it appears today at the Museum

Installing the Signal

Sources:
Trains and Technology: The American Railroad in the Nineteenth Century, Volume 4 By Anthony J. Bianculli
Railroad Signaling by Brian Solomon
Ball Signals of Vermont, Fall 2003 issue of Classic Trains Magazine, by Jim Shaughnessy.

E-VERSION OF THE LIGGIE

If you prefer to access the newsletter in electronic format rather than to receive a hard copy, please notify the office at 724-238-7819 or send an e-mail to *info@lvrra.org*.

NEW MEMBERS

Since Last Publication

Gerald Bartolomucci
Effie Nicodem

MEMBERSHIP DUES

Notifications were sent to "Friends" whose memberships have expired. If you haven't sent in a renewal by October 15, this will be the last issue of the "Liggie" that you will receive.

CALL FOR VOLUNTEERS

If you would like to volunteer at the museum, stop in or give us a call @ (724) 238-7819, to discuss available opportunities.

The Liggie is published quarterly for Friends of the LVRRA.
Mimi Owens, Co-editor
Bill Potthoff, Co-editor

Caboose Reopens To Visitors After Exterior Restorations Completed

With freshly painted wood and iron work, the Bobber Caboose at the Ligonier Valley Railroad once again is welcoming visitors aboard. St. Clair Construction, with the assistance of Art McMullen, meticulously replaced rotted timbers in the roof and walls and the exterior was painted by JJ Brown. Iron work was removed and repaired by Ramsey Machine, then sent to Great Dane Powder Coating. Directors Art McMullen, Dave Byers, Paul Fry, Tom Donchez, Tom Hunter, and Bill McCullough spent weekends reinstalling the ironwork. Platforms were built to replace the existing surfaces that had deteriorated from years of exposure to the elements.

The caboose, which now rests on a set of tracks at the museum, was donated to the museum by the Costello Family of Summerhill. The move took seventeen months from its inception in October of 2006 to February 2008 when the move was completed.

A brief history of the Bobber Caboose
The Bobber Caboose is a short, stubby boxcar with just two axles. The term Bobber was coined because of the way the car "bobbled" along the rails. The caboose housed non-engine crewmen. This was the conductor's office where paperwork was processed and it's where the brakeman waited for the whistle sounding the signal to stop. Once the whistle sounded, the brakeman would climb out of the car and make his way forward twisting the brake wheels atop the cars. Meanwhile, a brakeman riding in the engine would twist the brake wheels, working his way to the rear. Once the train stopped, the flagman would descend to the ground and walk a distance from the train holding lanterns, flags, and other warning devices to stop any approaching trains. The caboose was considered a home away from home as the crew would eat their meals in the caboose, and on longer excursions, provided sleeping quarters. Additionally, tools and equipment were stowed away in the car.

By the early 1980's, advancements in technology signaled the end of the need for a caboose. Airbrakes replaced the need for a brakeman to manually set the brakes, freight cars became so high, the view from the cupola was blocked rendering it useless, and the "End of Train" devices or EOT's fed information to the engineer that allowed the crewman to monitor the rear of the train. Red flashing lights now signal the end of a train to warn traffic approaching from the rear. With this technology, the railroads viewed the caboose as non-revenue inventory. They could no longer justify the cost of buying and maintaining the cars. Thus the caboose was phased out; although, there are some small railroads that continue to utilize a caboose.

To read more about the history and the different types of cabooses, visit the museum and ask to research this topic from the museum's library. While you are there, make sure you take time to explore the Bobber Caboose.

RECENT CONTRIBUTIONS

Thanks to all contributors for the following items that have been donated to the LVRRA since the last Liggie publication.

Franklin Berth:
Railroad ties carrier
LVRR time table 1938
2 identical "Acid Handle Carefully" signs, LVRR
PRR Seal Report book, October 11, 1995

Ray Kinsey:
36 photos from 1952 Rail Fan Trip

William Burns:
1 Brotherhood of Railroad Trainmen framed charter from The Grand Lodge, Ladies' Auxiliary
1 pin – lettering on pin reads L.A. to B.R.T. 1889 – Twenty Years. Attached by chain is the number 40

Bill Potthoff:
Guide to Railroad Switch Keys – Identifications and configurations for over 600 Railroads and related applications
Book titled Railroad Signaling by Brian Solomon

John Parker:
1 Silver platter – Union Pacific Railroad
1 Silver syrup pitcher – Union Pacific Railroad
1 Silver tea/coffee creamer – Pennsylvania Railroad
1 Silver Teapot – Pennsylvania Railroad

Jim Aldridge:
1 Pennsylvania Railroad menu – The General
1 Pennsylvania Railroad menu – The Trail Blazer Breakfast
1 Baltimore and Ohio R.R. menu – Breakfast A La Carte
1 Pennsylvania Railroad Dining Car Ad

WISHLIST

In addition to photos, maps, stories artifacts or other information we are particularly looking for any photographs of the interior of the Darlington Station taken at any time. Some of our members lived in Ligonier and Darlington or around the area so there must be someone who took a picture inside the station. We have heard from one member who lived in Darlington, now retired and living in Clearwater Florida, who thinks he "may" have a photo as he and his mother used to come to the station and have hot chocolate with Mrs. Snyder. He will be back in Ligonier in January and is bringing his photo collection with him. Hopefully we can find a photo.

Other photos that we are looking for are any of the earlier locomotives or rolling stock from the beginning of the line in 1877 through the 1920's.

One other thing we would like to acquire is any documentation regarding the Ligonier Valley Rail Road such as notes from Board Meetings, financial records, internal memos or any paper regarding the LVRR. These would be an immense help in filling in the history of the railroad.

CALL FOR STORIES AND FEEDBACK

- If anyone has any photos, maps, stories or other information about the Ligonier Valley Rail Road, please give us a call at 724-238-7819 or send an email to info@lvrra.org. We would love to hear from you. Thank you.

- If you have a problem with the new version of the "Liggie," please let us know. As you know, we changed the method of mailing starting with the last issue; so instead of mailing in an envelope it comes in this format with the address pre-printed. This reduces our costs for envelopes, stamps and time in stuffing about 500 copies.

DAY OF GIVING 2013

The Day of Giving 2013 will be held on Thursday, October 3, 2013, from 12:00 a.m. ET until 11:59 p.m. ET. Every donation placed through Westmoreland Gives on October 3, 2013 will be matched by the Community Foundation of Westmoreland County. To donate to the LVRRA, go to:
www.westmorelandgives.org

Day of Giving 2013 Instructions

Go to http://www.westmorelandgives.org

1. Click on Donate Now
2. Enter your name, email and phone number in appropriate boxes. Please note you must have a valid email address to receive a tax receipt for your donation.
3. Select the Ligonier Valley Railroad Association from the drop down menu. You can also begin typing a nonprofit's name in the box to narrow the list.
4. Enter the amount you wish to give (example: 50.00)
5. You can make donations to additional organizations by clicking "Add Another Nonprofit." You can give to up to 10 nonprofits during one session and to both PittsburghGives and WestmorelandGives organizations. Once you are ready to complete your transaction, click "Go To Checkout" and you will be taken to the secure credit card screen.
6. Mastercard and Visa are accepted for payment and you will receive confirmation of your donation and a tax receipt via email within an hour of the transaction. Please remember to notify your credit card issuer if you plan to make a large donation as they may hold your transaction as per your fraud protection services. The minimum gift per organization is $25.
7. Enter in your credit card information on our secure server and click "submit." You will receive confirmation that your donation has been received and an email will be sent to you for tax purposes.

CONTACT INFORMATION

Ligonier Valley Railroad Association
3032 Idlewild Hill
PO Box 21
Ligonier, PA 15658

724-238-7819
info@lvrra.org
www.lvrra.org

BOARD OF DIRECTORS

FRIEND FOREVER

IN MEMORIAL

Harry "Tom" Bortz

From The Museum's Collection:

RR Locks and Keys

by Bill Potthoff

Locks were and still are an important part of railroad operations. They were widely used for general security purposes such as locking box cars, mail bags, switches, buildings and other items, so the railroad companies paid close attention to security from their inception. Most importantly, switches had to be secured. The procedure was to unlock the switch, throw it to the new position, and then lock it in the new position. A misaligned switch could cause a wreck.

Ligonier Valley RR Lock

At the left is a lock that was used by the Ligonier Valley Railroad. In this instance it was used as a switch lock. Although it isn't marked with a railroad name we know it was Ligonier Valley because we know its provenance. Typically, when we receive items such as locks or lanterns that are marked L.V.R.R., the LVRR usually means the Lehigh Valley Railroad. Railroad locks had to be strong enough to endure harsh, industrial conditions as well as repeated use. They also had to be standardized so that different employees could open them, provided they had the proper key. Locks evolved through a progression of styles, from very ornate customized variations to more utilitarian, standardized models. Among the most prized styles are the early "cast back" locks (also referred to by lock collectors as "fancy back" locks) which had ornate, three-dimensional designs cast into the lock body. The designs were usually based on the railroad's initials. Making such locks involved special fabrication and brass casting skills, since each design varied with the railroad.

Fancy Back Lock

Good examples of such locks with original patina can go for many hundreds of dollars.

In time, locks evolved to plainer brass models with simple cast initials, and then to standardized, steel models with stamped railroad initials. The steel models were subject to corrosion, whereas the brass models just acquired a patina. Value on the collectors market varies accordingly with steel models generally being quite inexpensive to acquire.

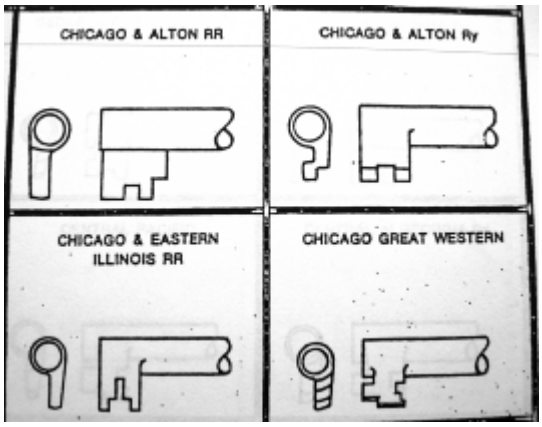
The shape of railroad locks varied also. "Heart shaped" locks were most common and were typically used to lock switches. A variety of other shapes were also manufactured for such purposes as locking signal facilities and buildings. Generally speaking, collectors consider a lock to be a railroad lock only if it is marked for a railroad. As with lanterns, "railroad style" locks could reasonably have been used in industrial operations of a non-railroad nature.

Railroad Keys

In order to use the wide variety of locks that railroads used to secure switches, signals, buildings, and other facilities, employees were issued special keys. Such keys were carefully guarded and were carried at all times on the job. Losing a key was once considered grounds for instant dismissal, and the story goes that the wife of more than one railroad man would safeguard his keys while he was off the job lest he lose them at the local "watering hole". Today, keys from long-gone railroads are much prized by collectors, with rare ones having substantial value.

Railroad keys were typically made of brass. As with locks, there are different styles of keys, but the majority of railroad keys were of a standard size made to fit a switch lock, with the bit customized to fit the particular locks of each railroad. Typically, keys were marked with a railroad's name or initials. An example is shown above right, marked for the Northern Pacific Railway and manufactured by Adams & Westlake. A number of manufacturers made keys for railroad use.

We have a book we use frequently entitled *"A Guide to Railroad Switch Keys"*. It has drawings of switch keys for most railroads, including the Ligonier Valley Rail Road. It is extremely useful, although a bit tedious to use, for identifying unmarked keys. There are about 600 keys listed so if you don't know the railroad it is a challenge to find the matching key. Below is a sample of a section of one page.



Metal straps, known as seals and usually about 6 inches long, were also affixed to things like box car doors, not to secure them, but to detect tampering. Once the seal was in place it had to be broken to open the doors. Later seals were made of aluminum.

Metal Seals

Sources:
Railroadiana.com

COMING SOON!

Ligonier Valley Railroad Association
PO Box 21
Ligonier, PA 15658

MISSION OF THE LVRRA

Ligonier Valley Railroad Association
Organized in 2004:

To Preserve *the legacy of the LVRR*

To Conserve *vestiges of the LVRR*

To Collect *memorabilia of the LVRR*

To Educate *the public about the history of railroading in Ligonier Valley*

Find us on the web at www.lvrra.org

Hours of Operation

11 a.m. to 3 p.m.
Wednesday through Saturday

Please check website for any changes

724-238-7819
info@lvrra.org