THE AUGUSTA COUNTY RAILROAD MUSEUM NEWSLETTER JANUARY/FEBRUARY, 2024



THE AUGUSTA COUNTY RAILROAD MUSEUM NEWSLETTER JANUARY/FEBRUARY 2024 THIRD EDITION

Waynesboro

What's Happening Now?

Getting a railroad built to

Charles Ellet Jr., who is he?

In This Edition



ON THE COVER... Edward Beyers rendering of the Virginia Central Railroad over Rockfish Gap as Augusta County celebrated the departure and arrival the county's first steam train

Editor's Note

Dear Reader,

Welcome to the third issue of the Augusta County Railroad Museum Newsletter. As our third issue goes to press, I want you to mark your calendar in the future for the annual **Shenandoah Valley Railroad and Train Show** that will take place **May 5th 2024** at the Augusta Expo. Particulars are on our website https://www.acrrm.org/trainshow

As you recall, the newsletter is authored in two editions, one bears a historical tone and the other a modeling tone; and depending on your selection of preference you are receiving one, or the other, or both.

In keeping with the theme of the beginning, our historian continues with the narrative of the beginning, following upon the transport of the lil locomotive *Frederick Harris* to Waynesboro, the difficulties of boring the Blue Ridge Tunnel, and the decision to build the Virginia Central Railroad across the Blue Ridge at Rockfish Gap. This is a splendid story, as few of us realize that U.S. Route 250, including the western Tunnel parking lot served as the initial right-of-way of the Virginia Central Railroad, over the mountain.

Knowing this, we can take our own excursion in our family car, and relive the journey along the incredible route designed by Charles Ellet Jr. as Augusta County's first railroad.

Come aboard!, as our museum historian provides background insight into who Charles Ellet Jr. was and how the Mountain Top Track came into being.

Kindly,



Brian A. Day Editor



Official Publication of the Augusta County Railroad Museum

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The Augusta County Railroad Museum is a 501(3)c non-profit organization chartered under the laws of the State of Virginia in 2001. It's purpose is to promote the interest in railroading and model railroading. Persons participate with the Museum as members, volunteering their time and talents to promote the hobby of model railroading and the public's awareness of railroad safety. Participation is open to the public. Annual membership dues are assessed at the rate of \$60 per year, pro-rated.

Regular monthly business meetings are held at the Augusta County Library in Fishersville Virginia on the third Thursday of the month beginning at 6:00 p.m.

The Augusta County Railroad Museum continues it's quest to find a new permanent location to serve as space for exhibits, displays and layouts. So far our attempts to find a modern retail rental space have been futile. The Museum still engages the public by participating in community events.

We will continue to continue to offer the community our support and resources to promote the railroading culture. Should you wish to support this organization, you can contact our Editor at <u>editor@acrrm.org</u> or write to our PO Box.

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What's Happening Now ?

A caboose !, a caboose !, we are getting a caboose !

Not totally true.

While cabooses left the mainline tracks many years ago as technology replaced the necessity to keep railway workers on both ends of a train, the Augusta County Railroad Museum has contracted with ProLines Trailers of Rocky Mount Virginia to construct a traveling trailer shaped like a caboose. The trailer will feature an enclosed traveling layout and will participate in railfan and community activities in the region, promoting Augusta County rail heritage and tourism. Be on the look out for our caboose while traveling the local Interstate and know it's coming to an event near you. Anticipate that we we will be providing you with progress updates, photos of the work to create it , and schedule for seeing it, as it progresses to completion.



Plans of the caboose include features allowing for the sides to be raised and rear ramp lowered to promote visibility and viewing access



Arrival in Staunton as the Buckingham Branch Railroad train crew gently ease RF&P 101 onto the Shenandoah Valley railroad inbound delivery track.

GP 7 ex-R&FP 101, ODCX 101 visits Staunton for repairs

News of GP7 ex-Richmond Fredricksburg & Potomac 101, now-Old Dominion Chapter of the National Railroad Historic Society's 101 impending arrival reached Staunton about five days before it traveled from Clifton Forge to the Shenandoah Valley Railroad yards in Staunton Virginia. The locomotive was originally RF&P 104 built in 1953. The locomotive is scheduled for mechanical repairs which will be conducted with the talented assistance of Precision Locomotive Services LLC of Staunton. The locomotive previously saw excursion service on the Buckingham Branch between Strathmore and Dillwyn Virginia in May 2018. Its travels from Clifton Forge to Staunton delighted nostalgic rail fans as the locomotive was placed together once again with Buckingham Branch locomotives now serving the ex-C&O Mountain Subdivision. More historic pictures of the locomotive can be found at http://www.rrpictures.net and on YouTube. Search for RF&P 101. You can learn more about the Old Dominion Chapter of the NHRS at https://olddominionchapter.com

Virginia Scenic Railway announces 2024 schedule for it's Allegheny Special and Blue Ridge Flyer dining excursions

The Virginia Scenic Railway has opened ticket reservations for it's Allegheny Special and Blue Ridge Flyer dining excursions commencing January 20, 2024 – June 30, 2024. This season, the AUGUSTA dining car (44 seats) joins the ARVONIA (34 seats) on each trip. Two journeys depart Staunton's downtown station on Thursday, Friday, Saturday, and Sunday. The Allegheny Special departs at 10:30 a.m. heading to Goshen and return; while the Blue Ridge Special departs at 3:30 p.m heading to Ivy and return. The ticket price is \$120 per person. Tables are sold as two seats or four seats, meal choices are selected at time of reservation. Rides will depart from the Amtrak station in historic downtown Staunton. Please allow plenty of time to find parking. Check ticket availability at https://www.virginiascenicrailway.com



AUGUSTA dining car.



Chesapeake and Ohio Historical Society schedules it's 2024 George Washington Train Show for March 2nd and 3rd

The Chesapeake and Ohio Historical Society has scheduled it's 2024 George Washington Train Show on March 2^{nd} from 10:00 a.m. – 4:00 p.m. and then on March 3^{rd} 12:00 p.m. – 4:00 p.m. Visiting areas will include the C&O Heritage Center at 701 Main St, the Clifton Forge Fire Department at 701 Church St, as well as a series of historic presentations at Mountain Gateway Community College, Warren Hall, 1000 College Dr., Clifton Forge Virginia. The Chesapeake and Ohio Historical Society headquartered in Clifton Forge serves as the premiere custodian and repository for the vast document collection that allows the Society to publish its regular magazine and specialized books. Admission is \$5.00. You can find more specific information online at the museum's website https://cohs.org/heritage





Col. Charles Ellet Jr.as rendered by H. B. Hall engraver in Lives and works of civil and military engineers of America, Charles B. Stuart's, D. Van Nostrand New York, 1871, opposite p.257 (Courtesy Wikipedia)¹

For most people, Charles Ellet Jr. is unheard of. That would be certainly understood unless you live near one of his remaining achievements. In only a few instances you might investigate him further, as almost everything that is old in America was built by someone. Another person is just another person.

As the Museum began the study of the work by the Virginia Central Railroad to cross into Augusta County, three names stood out. There was William Kuper, who surveyed westward passage to Harrisonburg by Swift Run Gap, and offered comparison to westward passage by Rockfish Gap to Staunton. Then the very notable Col. Claudius Crozet of the Virginia Board of Public Works in charge of the Blue Ridge Railroad and tunnel construction and strangely there was a third, Col. Charles Ellet Jr. as chief engineer of the Virginia Central Railroad. Certainly there was a role to be played in 1854 as the Chief Engineer of the Virginia Central Railroad.

As described in the *National Cyclopedia* of American Biographies, Volume 4, James T White New York 1895, page 360²; which begins

"ELLET, Charles, civil and military engineer, was born at Penn's Manor, Bucks County, Pa., Jan. 1, 1810. (He was the sixth child of 14 born to Charles Ellet Sr. and Mary Israel.) His father was a farmer, and in farm work the boy passed his life until the age of sixteen, when he was sent to school at Bristol, Pa., where he developed a special fondness for mathematics and decided to become an engineer.

He commenced his career as a rod-man measuring for the Chesapeake and Ohio Canal," holding a sixteen and one half foot pole (a linear rod commonly marked with measured delineations) that can be sighted using a survey compass to determine offsets and distances.



Early American survey tools consisted of a chain (20 links, that could be stretched to 66 feet), survey compass, slide rule, and rods (not pictured) (Courtesy American Philosophical Society)³

At the age of eighteen he was assistant surveyor of Maryland, working for Benjamin Wright as a volunteer and then promoted with salary to Assistant Engineer of the Fifth residency.

Benjamin Wright was prominent in early American Civil Engineering. He served as chief engineer of the Erie Canal and Chesapeake and Ohio Canal, and later hailed as "Father of American Civil Engineering".⁴

Having saved enough money to study in Europe, he boarded a sailing vessel headed to Paris France. Armed with a letter of introduction to the Marquis Lafayette, both Lafayette and the American Ambassador "pulled strings" to enroll Charles in the "L'Ecole Polytechnique de Ponts and Chaussees "⁵ (*trans.* Technical School of Bridges and Highways) Charles studied bridge construction and the use of new construction materials, such as twisted steel wire. After studying four months, he toured Europe and became a firm believer in the use of twisted wire for





The Fairmont Bridge in Philadelphia as illustrated in an engraving. It was the first wire suspension bridge in America. (Courtesy U.S. Library of Congress)

suspension bridge construction.

Returning to America he began his new career in civil engineering by proposing to Congress the construction of a suspension bridge in the vicinity of Georgetown in Washington D.C.

Sin : In obedience to the before the House a com- Charles Ellet, jr. Esquire icet of the contemplated 1 ington," I have the bonor officer or clerk in this offik. Several letters are on fi Bristol, Pennsylvania, dat bridge across the Potomac to be referred to in the re the communications on fil date on the day mentiones transmit the originals.	e resolution of the House of Representatives of ecting the Secretary of the Treasury "to lay unnication of the 6th of October, 1853, from , a civil engineer of Pennsylvania, on the sub- ridge across the Potomac at the city of Wash- to state that, after a diligent search among to such communication can be found, and no e has any knowledge of such a communication- le in the department from Charles Ellet, jr., of ed in 1832 and 1833, jin/relation to a suspension river, and he is, I presume, the person intended solution. I therefore herewith transmit all of received from him, although none of them bear l in the resolution. In order to avoid delay, I we the honor to remain, Sir very respectfully.
	Sir, very respectually,
	Lour obedient servant,
	R. B. TANEY,
	Secretary of the Treasury.
Hon. A. STEVENSON,	the space part of charge states the second states
Queshing of the H	anal of Dame soon to times

Cover letter to a proposal submitted to Congress. (Courtesy U.S. Library of Congress)

But the endeavor did not prove successful as the technology was unproven, as well as, it was felt he was too young and inexperienced.

He found employment as the Assistant Engineer of the Utica and Schenectady Railroad and then a position as surveyor on the New York and Erie Railroad with Benjamin Wright.

Both Benjamin Wright and Charles Ellet Jr. found follow-on assignments on the James River and Kanawha Canal Company. Charles Ellet was assign the third section from Tye River to Lynchburg Va. and took lead of a survey crew, mapping the path, and formulating the solicitations for proposal. After Benjamin Wright departed to another employment



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opportunity, Charles Ellet was appointed Chief Engineer and continued to work the position until 1839, with the work of construction completed in 1840. Ironically history would repurpose the tow path March 5th 1880 as the Richmond and Allegheny Railroad.

Charles returned to Philadelphia to write An Essay on the Laws of Trade. He submitted a proposal to St Louis for a suspension bridge crossing the Mississippi and began surveys of Philadelphia.

In 1842, he successfully bid and constructed the first suspension bridge in America at Fairmont Pennsylvania.

He continued by writing *The Position*

and Prospects of the Schuylkill Navigation Company as a proponent of canals hauling coal in competition to the newly constructed Reading Railroad. His canal advocacy endeared the stockholders and they employed him as President of the Schuylkill Navigation Company. As President, 1846-1847, he surveyed and enlarged the canal to accommodate larger barges and completed that task.

His next project was the proposal and construction of the Niagara Falls Suspension Bridge. Begun by sailing a kite across the river, the 800 foot bridge spanned the Niagara River and was constructed as a temporary bridge in 1848. It later received a carriage way and finally a railroad in 1855.

Following litigation with the Niagara Bridge project, Charles moved on to the proposal and construction of the Wheeling Virginia (now West Virginia)



The Wheeling Suspension Bridge, from 1848-1851 it was the largest suspension bridge in the world. (Courtesy U.S. Library of Congress)



The Niagara Falls Suspension Bridge designed by Charles Ellet Jr. and constructed as a temporary bridge in 1848. It was later completed by John August Roebling in 1855 (Courtesy Wikipedia)



The Wheeling Bridge in Virginia as illustrated in an engraving. At the time of it's construction it was the
largest suspension bridge in the world. (Courtesy Wikipedia)Bridge.published as The Mississippi and Ohio

This bridge also found itself in litigation. The steam boating interests argued that it blocked the river passage, and the Supreme Court ruled in their favor. Charles immediately lobbied Congress and passed into law, that the bridge served as a postal route, and the Supreme Court did not have authority to rule in the steamboat interests. The bridge later suffered damage in a storm and was repaired. It remains in use today.

With three historic bridges, Charles was becoming notable in civil engineering circles, the U.S. War Department commissioned him to conduct a study of the Mississippi delta, for which he published as *The Mississippi and Ohio Rivers*.

Charles then became the chief engineer for the Pennsylvania Railroad, and later submitted a second proposal for a suspension bridge at Georgetown Maryland titled, *Report on a Suspension Bridge Across the Potomac, for Rail Road and Common Travel*⁶, in 1852.

In 1853 he was appointed Chief Engineer of the Virginia Central Railroad. In this new position, he was issuing solicitations for bid to construct the railroad from Waynesboro through Staunton to Panther Gap near Goshen. As railroad grading crews finished the roadbed, Charles had an unforeseen problem. The intermediate link between Woodville and Waynesboro was uncompleted. The task of constructing the line by the Blue Ridge Railroad was taking more time than anticipated due to the difficulties of that construction.

With pressure mounting to get heavy rails, ties, anchor plates and spikes into the Shenandoah Valley to lay track, he proposed the construction of a temporary railroad over the mountain at Rockfish Gap. After analysis and explanation of why it was necessary, his proposal was accepted, and slave crews directed by Claiborne Rice Mason began carving a ten foot ledge from east of Waynesboro, over the mountain to near west of Brooksville. On March 13, 1854 the temporary line from Waynesboro to Greenwood was successfully tested, put in service April 1, 1854, and remained in operation until the tunnel opened in April 13, 1858. 7

Sub sequentially, Charles addressed construction west of Staunton, and ventured to Europe with Virginia Central bonds to secure iron rails for the passage to Jackson's river.

It was during this trip to Europe that Charles read a steamship, the SS Vesta, accidentally rammed the SS Artica, sinking a vessel ten times larger. He immediately proposed such an idea to the Czar of Russia for use in the Crimean War. He received interest, only to lose the opportunity when the Czar was



The "Bridge across the Potomac above Georgetown D.C. for Railroad and Common Travel" as designed by Charles Ellet in 1853. As designed, this would have been the furthest railroad bridge southeast of Harpers Ferry. Today, a modern swing bridge links the Jefferson Memorial in D.C. with Crystal City Va.

assassinated.

Returning to America he sought to bring his observations to the attention of the Navy and other Secretaries by publishing, *Coast and Harbor Defences, or The Substitution of Steam Battering Rams for Ships of War* (1855).

As the United States of America entered into Civil War, Charles renewed his efforts to market this ideas to the Union, but there seemed to be a lack of interest to the point of comic satire.



Cartoon depicting Ellet lobbying for his ideas at the doorstep of Gen. McCellan. (Harpers Weekly, December 28.1861)

But in 1862, as the Merrimac rammed a vessel and sank it, Secretary of War Edwin M. Stanton commissioned Charles Ellet Jr. as a Colonel to gather and create the *United States Ram Fleet*. As directly appointed, Charles reported to Stanton, independent of the Navy.

Armed with orders in his had, he traveled to Ohio and purchased nine of the fastest steamboats he could find. Each was planked with heavy timber, and iron railroad rails on the bow to serve as the ram. Charles took command of the USS Queen of the West and assigned family members as captains of the other rams, specifically his brother Alfred W. Ellet USS Monach, his son Charles Rivers Ellet, and his nephew John A. Ellet.

On May 25th 1862, Ellet's Ram fleet joined up with Charles Davis's Mississippi River Squadron of



THE BATTLE OF MEMPHIS (JUNE 6, 1862), LOOKING SOUTH. AFTER A DRAWING BY REAR-ADMIRAL WALKE.

Wood block illustrating the Battle of Memphis as viewed behind Union gunship's looking south. Notice the two paddleboats at extreme right labeled Queen of the West and Monarch. (U.S. Library of Congress)

Gunboats.

On June 6th, 1862 the ram and gunboat fleet met the Confederate gunboat fleet just north of Memphis. As both sides drew up in lines, Ellet initiated an attack by the USS Queen of the West followed behind by the USS Monarch. The USS Queen of the West hit the CSS Lovell off bow, damaging the CSS Lovell severely. The battle soon turned into mayhem as Ellet's strategy of ramming the Confederate boats was not synchronized with the artillery fire of the Union gunboats. ⁸

While the Union ram fleet proved to be a decisive factor in damaging seven of the eight Confederate gunboats, it also proved costly to Charles Ellet Jr. During the battle, a Confederate sharpshooter shot him in the knee. Fearful of loosing the leg, Charles refused amputation. It later set in with gangrene. On June 21st, 1862, Charles died of measles and the complications of his leg wound in Cairo Illinois, becoming the only casualty of the battle. Following services at Independence Hall, he was buried in Laurel Hill cemetery, Philadelphia.

On February 17th, 1939, the U.S. Navy commissioned the Benham class destroyer, *USS Ellet DD 398*, in honor of the military service of Charles Ellet Jr. and four other members of the Ellet family.



The Benham class destroyer, USS Ellet DD 398

Endnotes:

- 1 https://en.m.wikipedia.org/wiki/ Charles_Ellet_Jr.
- 2 https://books.google.com
- 3 https://www.amphilsoc.org/blog/fewtechincal-items-questions-about-18thcentury-surveying-instruments-answeredpart-ii
- 4 Chesapeake & Ohio Canal Historic Resource Study, Harlan D. Unrau, National Park Service, Hagerstown Md.,2007, pg. 33
- 5 https://www.asce.org/about-civil-engineering/ history-and-heritage/notable-civil-engineers/ charles-ellet-jr
- 6 https://books.google.com
- 7 https://www.chornicalingamerica.loc.gov, Staunton Spectator
- 8 https://en.m.wikipedia.org/wiki/ First_Battle_of_Memphis





A postcard circa 1906 shows the right-of-way west of Crozet Va. heading to Greenwood Va. through Blair's Park.

At the beginning of 1840, the Lousia Railroad had completed the task of reaching Gordonsville, and a paralyzing political debate swirled in Richmond dividing the state into completing, investments. To the south, from Richmond to Lynchburg, and heading Buchannan to Clifton Forge was the ambitious undertaking of the James River and Kanawha Canal. It's early arrival at Scottsville, and it's lucrative plank road trade from Scottsville via Rockfish Gap into Staunton, barred any political consideration of running a railroad any further south than Swift Run Gap.

But in 1847, a surprising vote of the Louisa Railroad stockholders, plunged the Louisa Railroad into State Legislative controversy as the line deviated from its envisioned course to Harrisonburg and headed south to Charlottesville and west to Staunton and Clifton Forge. The Virginia Board of Public Works baulked at matching the obligatory 2/5 stock subscription. On a judicial appeal Mamamus, the State Attorney and Virginia Courts reviewed the new Virginia Central charter and were forced to accept and favorably support the subtle alteration of "extension to the base of the Blue Ridge".

This entwine the Virginia Board of

Public works financially into a commitment to build a railroad from Blair's Park to Waynesboro.

Not to be understated, 1847 proved to be a huge year for the Virginia Central. In seeking independence from the influences of the Richmond, Fredericksburg and Potomac; the Lousia Railroad ordered it's first four 4-4-0 Norris locomotives and began grading and masonry construction west of Gordonsville, through Cobham, Lindsay, Keswick, Shadwell and Charlottesville.

No longer a mere farm-to-market branch line of the Richmond, Fredericksburg, and Potomac; the freshly chartered Virginia Central had a willingness to challenge political opponents in the State legislature, and this placed the Virginia Central at competitive odds with it's previous mentor. Everything previously considered status quo, was now on the table for negotiation. It included revising freight rates, addressing rules of anti-competition of Alexandria based travel, and formulating rules of freight transshipment at Hanover Junction (Doswell). As discussions grew increasingly competitive, the Virginia Central sought and was granted authority to independently construct tracks into Richmond.

Track construction remained identical to the method employed at that time across the State which consisted of logs U notched for wooden stringers supporting iron strap. This had been amply suffice for the little Stephenson Planet locomotives imported from England, but as locomotives were becoming heavier, and the exposed wood aging, it would become necessary to replace this track with iron T rail. A bill would soon be passed in the legislature mandating 55 pound iron rails.

The Virginia Central would also appoint William A. Kuper to extend tracks west of Gordonsville. His appointment lasted until tracks arrived at Shadwell, when a legislative debate found T. J. Randolph (political representative of Albemarle, nephew of Thomas Jefferson, and awarded Virginia Central contractor) and Mr. Sengar in dispute about accusations of using heart pine to construct materially deficient culverts. Unfortunately William A. Kuper had the decency to factually address the matter, and suffering the wrath of an opponent's political sword, he shortly resigned thereafter.

With his resignation, the Virginia Central Board conferred in a special meeting and appointed his assistant, T. Colden Ruggles, as Chief Engineer of the Railroad. Ruggles quickly set to work, soliciting bids from Moores Creek to Christians Creek. This placed all tracks west of Charlottesville to Staunton under contract for grading, masonry, bridge construction, and ancillary structures.

Meanwhile the State chartered the Blue Ridge Railroad and placed Col. Claudius Crozet at it's helm. Budgeted at \$1,000.00 per year, and estimated at four years work, the task was to build a line from Blair's Park to Waynesboro. By February 9th, 1850, Crozet had surveyed and formulated a path, that would equitably rise from Blair's Park, and plateau at both Greenwood and Afton, allowing for a station halt without gradient. The remaining portions of the line would be inclined, with the apex at the west portal of the main tunnel. Contracts were let in eight sections, numbered one at the main tunnel and sequentially in return to Blair's Park.

As Claudius Crozet supervised the the Board of Public Works activities of the Blue Ridge Railroad, the Virginia Central aggressively pushed it's surveys and grading contract work toward Covington Virginia, in the hopes of jointing with the Covington and Ohio Railroad. All was going to plan, until T. Colden Ruggles accepted the Assistant Engineer position with Mr. Shaw on the Covington and Ohio. This left the Virginia Central looking for engineering talent, which it soon found in Mr. Charles Ellet Jr.

Charles Ellet Jr. soon found that he had severe logistical obstacles in the way of moving construction materials into the Valley, due in part to the absence of a continuous route through the Blue Ridge Railroad segment. All of the rails, chairs, spikes and ties needed in the Valley were being hauled by wagon from Woodville over the mountain to Waynesboro.

The bridge over Mechum's River would be soon completed, and potentially the racks built to Greenwood. Charles began survey of a temporary route for the tracks to go over the mountain and then into Waynesboro.

With that in mind he proposed, moving a locomotive into the Valley by wagon via the roadway, raising funds in Richmond by having the public vote for Richmond endorsement of Virginia Central Railroad bonds, building a temporary track across the mountain, and ordering specialized tank locomotives from Baldwin Locomotive Works and Anderson and Souther of Richmond. By July 23rd 1853, everything was in place.

Claiborne Rice Mason, superintendent of the Virginia Central, found 60 negro slaves available for the task, and began cutting a ten foot shelf in the mountainside about a half mile west of the tunnel. It formed a big arc northwest of the bore and then progressed steadily to the summit of Rockfish Gap and then descended gently to intersect the planned path before Dove Spring Hollow.

As both the cuts and fills of the final path were still in construction.,

deviations around the work were added for the fill at Doves Hollow, detour around the second, Little Rock, tunnel and detour around the third, Brooksville, tunnel.

Tracks were now at Greenwood and the Greenwood tunnel, near complete. The segment from the main tunnel to Waynesboro, not started.

History will lack record of the delicate negotiation between Col Claudius Crozet, Claiborne Rice Mason , and Charles Ellet Jr.; but the result was a survey by Claudius Crozet to cut into the hillside on approach to the river so that it could create the fill materials needed for the embankment to the bridge head. Resources previously committed elsewhere were reapportioned to the work.

Sharp eyed visitors touring the Tredgar Iron Works in Richmond soon noticed the kit components for the three span bridge for South River and the behemoth *J.R. Anderson* 0-8-0T ordered for the Virginia Central. Both would soon leave the works headed to Greenwood.

At nearly the same time, Mathais Baldwin had just finished the first of two locomotives for the Virginia Central. The *M. W. Baldwin* was a 0-6-0T flexible beam locomotive of traditional proportions. But as a saddle tank locomotive, and with Baldwin's flexible beam adaptation, it became notable in locomotive evolution as a mountain climbing locomotive.

Baldwin's s flexible beam technology, allowed the front two axles to flex in lateral movement as a parallelogram, enhancing it's ability to tolerate curves.

The *C. R. Mason*, the second of the two Baldwin's soon arrived in Greenwood. A depot, water tank, engine house and turntable would be installed.

As preparations were being completed near Greenwood, a near equal set of preparations were occurring in

Angus Sinclair illustrated several of the locomotives adapted by Mathais Baldwin for use as six coupled and eight coupled locomotives using his flexible beam technology, this was the 0-6-0T tank locomotive.

Waynesboro. The kit for the Bollman trestle bridge fabricated by Anderson and Southers of Richmond arrived and work crews were busy setting the webbed lattice of cast iron parts upon the masonry stone piers in the river.

The South River bridge in Waynesboro became the first iron bridge cast and constructed in the Virginia

Meanwhile, back in Richmond, the additional locomotives ordered from the Tredegar Iron Works were nearing completion.

monumental day for the Virginia Central, for on that day the lil *Frederick Harris* ran backwards over the South River bridge, up the grade to the summit of Rockfish Gap, descended to

six hundred and sixty feet, wes made in twenty-five minutes. The descent on the west side was made in nineteen minutes. It is calculated that in the ordinary working of the road, the distance from Greenwood to Waynesborough will be made in one hour and a half by the passenger train—in two hours by the freight trains.

the mountain. The western slope, two miles long, was ascended in 15 minutes, and the

eastern slope, of two and a half miles, was descended in 25 minutes. Returning, the en-

tire trip from Greenwood to Waynesborough, ten and a half miles, was made in one hour

and nineteen minutes. The ascent from Ro-

binson's Hollow to the top of the mountain,

The track across the mountain, although called a "temporary track," is really one of the most substantial that can be built. The word "temporary" is only applied to it, because as soon as the Tunnel is completed, it is designed to discontinue it.

The powerful locomotive, "Joseph R. Anderson," already noticed by us, was on the track at the Central depot yesterday, and as soon as some little matters about it are completed, it will go up to take its place on the mountain track. This engine weighs about twenty-nine tons, and the tank containing the water to supply it, is placed on each side of the boiler, thus enabling it to dispense with a tender, and of course a considerable burthen in ascending the mountain. It is a powerful engine, and will be very efficient on the mountain. The "Baldwin," another engine, not much smaller than the "Joseph R. Auderson," reached the depot yesterday evening. It is also intended for the mountain track, and has its tank in contact with the boiler. It has, however, a regular tender besides, which it can use or dispense with as occasion may require. There is yet another powerful engine for the Central, at Rocketts, named the "E Foutaine," in compliment to to the President of the Road. It and the Baldwin were made in Philadelphia, by Baldwin, the experienced Engine builder .-These three engines are an important addition to the equipment of the Road.

Ironically, **the lil 14** ½ **ton Frederick Harris** rather than the 27 ton M. W. Baldwin or C. R. Mason became **the first locomotive to steam out of and back into Augusta County.**

The 1854 Bollman bridge appears in the 1891 Perspective Map of Waynesboro (Courtesy U.S. Library of Congress)

Testing continued on the mountain track as the 30 ton *J. R. Anderson* was put to the test. This time, continuing over the bridge at Waynesboro, through Fishersville, and into... Staunton !

ner. The cars reached Staunton at an hour when they were not expected, or they would have received a welcome worthy of an event so long anxiously awaited, and so important to the people of Augusta. Verily it did seem wonderful to see the iron-horse flying with his train along the hillsides upon which we were wont to play in schoolboy days, and exciting it was, in the highest degree to hear the shrill whistle of the locomotive, reverberating through the streets of old Staunton. Of course it waked people up, and crowds rushed from all quarters to get a peep at "the elephant."

Some there were who had never before seen a passenger car, and they looked on with admiration and amazement; while others, to whom it was a familiar sight, gazed at it with an inquiring stare, as if they wished to say, where did you come from? and where are you going to? There were not a few who apparently regarded it as a thing of life, approaching it with the utmost caution, and touching even its exterior with extreme tenderness. Several handsome onmibuses had been provided for the occasion, but the cars came in with such a rush that the drivers did'nt have time to hitch up. Our good friends, the proprietors of the Hotels, owe the passengers an apology.

Strange as it is to see a train of cars in our midst, it is stranger still to think that on their way hither they have actually surmounted that great barrier to trade and travel, the Blue Ridge! Ten years ago if any one had predicted such an event, he would have been regarded as insane by nine-tenths of the population, and perhaps been consigned, upon fama clamosa, to one of the cells of the Lunatic Asylum from which the inmates now gaze daily upon the passing cars. It is indeed a splendid triumph-a wonderful achievement-that ought to immortalize the names of the accomplished engineers, whose genius conceived the idea of crossing over while others were boring through the Blue Ridge, and by whose energetic labors the work has been so soon and so successfully accomplished. Their names will live in the history of Virginia alongside the "Knights of the Golden Horse-Shoe"-the first white men who ever crossed the Blue Ridge, and penetrated the Valley of Virginia.

We learn that the cars will not run regularly to Stanuton until the 1st of April. By that time, however, our people will have the full benefit of a railroad connexion with he best markets of Virginia. Three cheers for steam!

As successful as this was, the return trip was not as nearly so triumphant, as Charles Ellet attempted to verify the worthiness of the passenger car to withstand repeated halts on the descent of the Greenwood grade by hand brake.

STAUNTON SPECTATOR. STAUNTON: WEDVESDAY, MARCH 29, 1834.

account of a fearful accident which occurred on Tuesday the 21st inst., on the mountain track.— The engine left Staunton that morning with a single car attached, containing the engineers and thirty or forty passengers. While descending the mountain on the Eastern side, the car was detached from the engine and left to depend upon its own brakes to retard its speed. The brakes gave way, and the car being then unmanagable, rushed into the engine. Several persons jumped off after the collision, and one of them—George Clemens, a fireman—fell upon the track and having both legs and one arm crushed by the car, died a few hours afterwards. Some four or five other persons were burned and bruised, but not serioualy injured. The damage done to the engine and car is estimated at \$100 to \$150.

The accident is attributable solely to a defect in the brakes, and no apprehension need be felt from the same cause hereafter. The cars have since crossed the mountain repeatedly with entire safety, stopping at various points, and thus proving that they are perfectly under the control of the brakes.

The trip on which the accident occurred was experimental, and the passengers went at their own risk, contrary to the advice of Mr. Ellet, the chief engineer.

Despite this tragedy, regular passage of trains Richmond to Staunton commenced.

STAUNTON SPECTATOR. STAUNTON: WEDNESDAY, MARCH 29, 1834.

Advent of the Cars!

On Monday last the passenger train came through in regular course from Richmond and reached Staunton about 4½ o'clock in the evening A freight train had come in about two hours pre viously. It was Court day, and when the whistle of the engine was heard the people were seen flocking to the depot from all directions as if at the call of a trumpet, and soon a crowd had gathered around which no man could number—scarcely.

The passenger trains, we are informed, will now run regularly through from Richmond and will reach Staunton every afternoon at about 4 e'clock. The trains on the Orange and Alexandria Railroad made their first connection with the Central cars at Gordonsville, on Monday also, and will henceforth run regularly in conjunction with the Central trains, Eastward and Westward...... Passengers by this route can now leave Staunton in the morning and reach Baltimore the same evening, and thence to New York in a few hours more !

No fears need be apprehended on account of the late accident at the temporary track. "Danger is the parent of safety," and the consequence of that mishap is only to induce a caution which ensures against a repetition of this or other accidents like it for the future.

Experiments were made on Monday last with heavily laden burden cars, which were passed successfully down the steepest grades of the temporary track with nothing but the brakes to control their descent; thus proving that if the apparatus of the brakes is in good condition, cars may be controlled entirely by that means.

But the determination is never to trust the pas-

senger car again to descend detached from the Locomotive. The power of reversing the movement of the locomotive, instantly, gives ample means to check the descent of a train attached and prevent danger from this source.

The danger of a car becoming accidentally detached, on accending the grades, and thus left to run backwards is to be provided against by several expedients besides the mere reliance on the brakes; —spiked stakes will trail at the rear of a car at such angles as to stick in the ground and stop the car when it starts to move backwards, and other still more effectual contrivances are also to be arranged, so that little danger need be apprehended from this cause.

We understand that Mr. Ellet will himself accompany every passenger train over the mountain track for some time yet, until perfectly assured of the safety of a passage, by providing against all probable causes of danger, and by practising all the employees of the train to their appropriate duties under his own direct supervision.

SO far this experiment had been, an exhausting pursuit of an insurmountable objective. It connected Staunton to Richmond and put into immediate service the tracks of the Virginia Central west of the Blue Ridge. It promised to generate revenue to pay the interest due on bonds, pay a dividend, and then as if things couldn't get worse in late March, ...it snowed !

RICHMOND ENQUIRER. FRIDAY MORNING, MARCH 31, 1854.

CARS FROM RICHMOND TO STAUNTON.-To morrow (lat April) trains will commence running daily be tween Richmond and Staunton. No fears, eays the Staunton Speciator, need now be apprehended, on account of the late socident on the mountain track. "Danger is the parent of safety," and the consequence of that mishap is only to induce a caution which ensures against a repetition of this or other accidents like it for the future. Experiments were made on Monday last with heavily laden burden ears, which were passed successfully down the steepest grades of the itemporary track with nothing but the brakes to control their descent. Besides, other safeguards have been introduced, guaranteeing the most perfect safety to passenger and freight and amply provided for.

Much snow and ice were on the mountain-top track, yesterday. It was expected that the trains would not be able to stand euch a trial as this, but we are informed, on the suthority of passengers, that the trip was made yesterday in the most satisfactory manner. The train was entirely under the control of the brakemen. The cars were not detached, but the use of the brakes made it unnecessary to resort to the power of the engine to keep them back.

As summer approached, the schedule of the trains was adjusted, and arrangements made to transport patrons by stage coach west of Staunton to the resort hotels near the springs.

scires to ensure to Passengers the comforts they have a right to calculate on. Returning, our Lines will leave White Bulphur at 11 A M. Passengers desiring expedition will reach Staunton next day in time to get to Richmond by 9 P. M., being less than a day and a half. Those de-siring comfort will arrive at Warm Springs at 6 P. M., rest all night, leave next day at 6 A. M., and ar-rive in Staunton 6 P. M. ready for the Morning Train for Richmoud, Alexandria or Baltimore. Passengers for LE X IN G TO N. NATURAL BRIDGE, BUCHANAN and FINCASTLE will be taken through the same day from Richmond by the Express Line Those for LEXINGTON by dark. Passengers for ROCKBRIDGE ALUM arrive to breakfast 2nd day.

breakfast 2nd day. Passengers who get Through Tickets may stop at any point, or change from one Line to the other. Those desiring Extra Stages can charter them at Staunton WM. P. FARISH & CO. June 21st, 1854. je 24

From 1854 through 1858, the mountain track served many, as we read in this exerpt.

THE DAILY DISPATCH. Thursday Morning, July 31, 1866.

Excarsion to Milibero'.

THE CENTRAL RAILBOAD.

ceeds that of last year. There were seven hundred visitors at the White Sulphur Springs the latter part of last week, and five hundred at the Rockbridge Alum. The last is now comperatively easy of access, the present terminus of the Central Road being only five miles distant. At Jarman's, Meechum's River, our company found some very agreeable and palatable refreshments prepared, which put most of us in good spirits, and enabled us to recover in some degree from the effects of the late drought. The mountain passage, the huge locomotives which are there attached to the trains, and with slow but irresistible power draw their burthens steadily and securely over the mountain track, the magnificent prospect from Rockfish Gap, are all too familiar to the reader to require description. When we cross the Blue Ridge mountain we never know which most to admire, the grandeur of the scenery spread out before us, or the greatness of the human mind, as shown in railroads, locomotives, and especially in this mountain track, an achievement which ought to immortalize Mr. Ellet. In crossing the mountain our attention was called to an object which even the unprecedented cold of last winter had failed to overcome. In one of the water tanks, which supply the iron horse in this lofty mountain section, the water was never frozen during the most intense cold of last winter ! It is fed by a bold spring, close at hand, and which, no doubt, is very cool and refreshing in summer. We have already published an account of the progress of the main tunnel, from which it appears that but a small portion of the work remains to be completed, and it is hoped that all will be ready for travel by the beginning of next year. As soon as the tunnels are ready the temporary track will be taken up, and used elsewhere, and the trains will dash through in perfect safety at twenty miles an hour At least an hour will be saved in time by the completion of the tunnel, to say nothing of the facilities for the transportation of freight which cannot be carried, in any very heavy burthen, over the mountain track. Arrived at Staunton, we found an excellent dinner awaiting us at the American Hotel, near the depot. Staunton continues to improve more than any inland town in Virginia .-Not only the public institutions, seats of educa tion, churches, &c., are elegant and even imposing but the proportion of handsome private residences is larger than in any town of the size we have ever seen. The passengers are allowed twentyfive minutes for dinner, and then start West .-This was to us the novelty of the eccasion, having never been on a rail-car West of Staunton. The road has been lately constructed to a point forty miles West of Staunton and near Millboro'. It

Travel via the Mountain Top Track lasted until April 13th 1858, when the eastbound mail train entered the Blue Ridge Tunnel and made the route over the mountain. forever redundant.

In it's abandoned state, Mountain Top Track would eventually become a farm road, and later lay the path for Virginia

Excursion on the Virginia Central Railroad.

REPORTED FOR THE DAILY DISPATCH]

On Tuesday morning, an excursion party start-od up the Central Railroad, to visit the present terminus of that great improvement It consist-ed of Gov. Wise and family ; Alex. Dudley, E-q.

and sundry other invited gu The party took passage in the mail train, at 74 o'clock, the spiendid new engine, Jno H Timber-lake, under the skilfai guidance of Jno Harden, farnishing the motive power. There were four cars, besides the mail and baggage. The last of the former was a new and beautiful specimen from the Union Works, Portsmouth, Va., just received,

and used for first the time, on this occasion. The distance to the Greenwood Tunnel was been accomplished and the train divided, "the Baldwin" taking one balf and "the C. R. Mason' the other, preparatory to the grand feat of crossing the Blue Ridge. This has been so often described that any attempt now is deemed superfluous. Suffre it to say that those who never had crossed be fore were filled with admiration and awe in contemplating the magnificent mountain scenery, and witnessing the triumphs of the engineering skill which first conceived the ides of crossing the Virginia Alps with iron rai', while all were pleased. The two queer shaped iron monsters, rightly named Mountain Climbers, did their appointed work slowly and surely, and on the arrival of the trains at the foot of the mountain on the other side, they were joined as before and proceeded on, drawn by the "Alleghany,' a large and powerful en-gine, recently bid t by the Tredegar Works. Ar-r ving in S a union at 3 o'clock the party proceeded under the conduct of C. B. Hill and other officers ot the road, to partake of an admirable dinner at the American Hotel. Embarking again the voyagers safely reached Milboro, where they were met and welcomed by Col. Fontaine. the les

Department of Transportation engineers to construct U.S. Route 250.

Charles Ellet would go on to write an authoritive essay, titled the Mountain Top Track, T. K. & P. J. Collins Philadelphia 1856, documenting the engineering wonders of the line. This book can be downloaded and read in entirety from,

https://books.google.com

Mathais Baldwin would continue to produce steam locomotives and would insert Charles Ellet's recommendation for mountain climbing locomotives in his company's promotional materials, titled. Baldwin Locomotive Works. Illustrate Catalogue of Locomotives, M. Baird and Company Philadelphia. 1878. That book can be downloaded and read in entirety from,

https://books.google.com

althought, Ellet's detailed excerpt is found on pages 32 and 33.