(Left) You can ride between the signal same tfoundations as this eastbound Western Maryland coal train at Sand Patch. None of the houses in the background still stand.
Kalmbach Media Library

(Right) A Class I-2 Decapod leads an eastbound loaded coal train across Keystone Viaduct ca. 1950. The 30 I-2's were the largest and most powerful of their type ever built. The two piers to the left were removed in 2003. The truss was raised in 2012.
Bill Price WMRHS

Chapter Ten
Keystone Gap

MILE 28: SAND PATCH

Fabled Sand Patch. The summit of the Alleghenies for the B&O, culmination of a 1.95-percent maximum westbound grade that begins 21 miles back in Hyndman (HI man), Pa.

The town of Sand Patch never exceeded a dozen or so houses, but at one time had a B&O station, water tanks for steam locomotives, a wye to turn them, a signal tower, and a post office. Helper locomotives pushed trains up to here in both directions. There was also an emergency interchange track between the Western Maryland and the B&O.

Sand Patch is one of the holy spots of railroading. On any weekend and most other days, photographers can be seen here and all the way down the east slope to Hyndman taking advantage of the dazzling scenery and frequent train traffic.

To clarify things, the B&O's crossing of the Alleghenies at Sand Patch had a lower summit (2,258 feet vs. 2,375 feet[24]) but steeper grades (1.95 percent) than the parallel Western Maryland (1.75 percent).

24. The original railroad elevation before the trail was built.

THE FRONTIER

You're entering the Frontier, or at least you were in 1763 when King George III (1738-1820) decreed that no Englishman should settle or trade "beyond the heads or sources of any of the Rivers which fall into the Atlantic Ocean from the West and Northwest." At the time, the king probably knew as much about American geography as the average American today knows about say, Kyrgyzstan, but that didn't stop H.M. George from deciding things. George was

the decider, after all.

But his decisions resulted later in that little dustup known as the American Revolution. The American Colonials paid about as much attention to the King's decree as we pay to the utterances of the head Kyrgyz.[25]

"Up Thine, King," said the settlers, and kept right on settling, which is what settlers did in those days. The French, who were beginning to occupy the far side of the mountains themselves, were incensed at the invading English. The Indians weren't all that thrilled with either one, having other ideas about their land being free for the taking.

And we're setting you up for the French & Indian War.

25. Turns out it's Sooronbay Jeenbekov and you don't care, now do you?

» **King George III.** NYPL

FRENCH & INDIAN WAR

Historian Francis Parkman called it the "final contest for the control of North America," but it was also fought in Europe and India, so some historians have referred to it as the first world war. The English called it the Seven Years War, since that was how long it lasted. We call it the French & Indian War.

On the other side of the Atlantic Ocean, England and France had been warring with each other off and on for most of the previous hundred years. They were equally hostile on this side. They were either fighting or looking for an excuse to do so.

In 1754, both countries had been colonizing North America for well over a century. England's colonies were concentrated on the Atlantic seaboard from Maine to Georgia with a population numbering about a million; they took all comers, regardless of ethnicity or religion. But most English land was already spoken for and the pressure was heavy to settle the west.

France was working on controlling the interior of the continent using the waterways that run from the Gulf of St. Lawrence, up the St. Lawrence River, through the Great Lakes and down the Mississippi River and its tributaries, some 3,000 miles. They built a series of forts at strategic points to secure their control, including Fort Du Quesne (doo KANE) at the forks of the Ohio River (now Pittsburgh). The French only allowed soldiers, priests, and French Catholic families of good standing into their colony, for a total population of 60,000 strung out over all those miles. And this is why so many of the towns along the river have French names.

Without getting bogged down in details, here's the gist of the war: It began on May 28, 1754, when George Washington's men attacked and killed a French lieutenant who happened to be the nephew of the commander of Fort Du Quesne. Washington had orders from the governor of Virginia to attack the fort, which was less than a year old. The French, allied with the local Indians, in retaliation attacked young Washington and his men at the hastily built Fort Necessity and defeated them on July 3, 1754,. This is the

» **Settlers Settling** NYPL

only time Washington ever surrendered.

In the course of the war, the English attacked and defeated every one of the French forts. But on the English colonies' home front, the Indians attacked settlers all along the frontier as far east as central Pennsylvania in an attempt to drive them out. Washington was commissioned to build a series of small forts to use as both shelters for the settlers and bases to attack the Indians.

The war ended when the English whipped the French at the Battle of Quebec on Sept. 13, 1759. Both commanding generals, Montcalm of the French and Wolfe for the English, were killed in the battle. But the Redcoats got the win, which is why you're reading this in English.

HOMEWORK: If you're interested in the French & Indian War — and who isn't? — Francis Parkman's "Montcalm and Wolfe" is an excellent read, probably the best on the subject. It's readily available online. You just need to read the Pennsylvania parts.

MILE 28: KEYSTONE GAP

Keystone Gap, also known as Flaugherty Gap, is an anomaly; the water running through it flows westward through the Allegheny Front, a prominent ridge that runs from West Virginia into northeastern Pennsylvania and often becomes the Eastern Continental Divide. It's known here as Meadow Mountain.

Flaugherty Creek and Piney Creek, six miles to the south, are the only westward-flowing streams that cut through the Front. Because of Keystone Gap, the two railroads came through the mountains here easily without a couple of more expensive tunnels.

Geologist Jim Shaulis posits that due to erosion, the Eastern Continental Divide will be in Meyersdale in 100,000 years, give or take a decade. You might want to plan on coming back for that. The climb will be much easier.

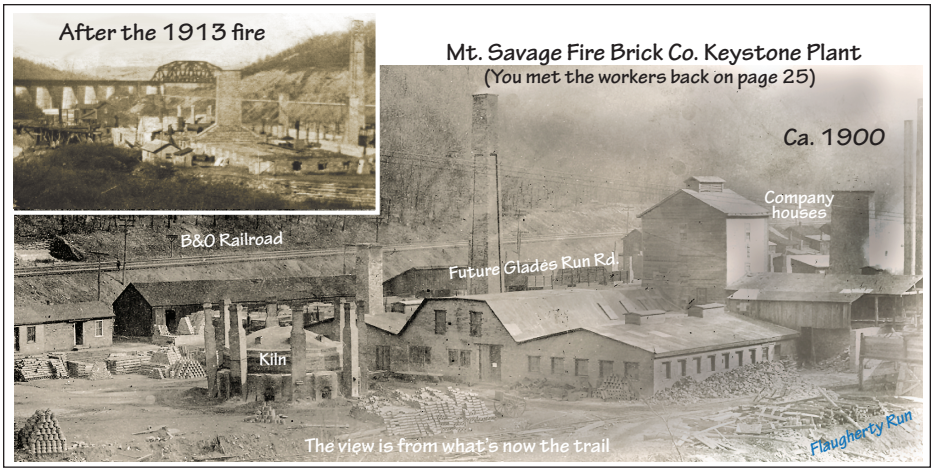
MILE 29.2: KEYSTONE JUNCTION

Mineral resources around Meyersdale were explored and identified fairly early; the biggest and most lucrative was called the Salisbury Coal Basin. In 1853, two men from Cumberland, Messrs. Roman and Bruce, bought a considerable tract of local land at what was referred to as "unheard of" prices. They were figuring the Pittsburgh & Connellsville Railroad would be there soon and they would become wealthy coal barons. They figured wrong. The P&C didn't get to the area until 1871 and Roman and Bruce had long since become bankrupt barons, along with several others waiting for the train.

When the railroad finally did arrive, it didn't come close to the Basin, so the new owners built a narrow gauge railroad from the new Keystone Mine. They called it the Keystone Mine Narrow Gauge Railroad, owned by the Keystone Mining & Manufacturing Co.

The KMNGRR ran from a place they called Romania (named, no doubt, for Mr. Roman when he was still feeling baronial), about where Meyersdale High School's football field is today, to Slabtown, the town that grew up near the brickyard, which they renamed Keystone Junction. The little railroad, all 5.5 miles of it, was opened in 1872 and abandoned in 1895.

The Savage Fire Brick Co.'s plant was already up and running when the narrow gauge railroad got there; it had been making fire brick since 1871 and shipping it out on the P&C. The Meyersdale Historical Society says that by 1884, the company was shipping its brick to "every state in the union as well as Canada, South America, and Mexico. The capacity of its works was 15 million (bricks) per year with the average quantity shipped about 700,000 per month." The company had two other plants along the B&O, at Williams and Hyndman, Pa., so this factory was respon-



sible for maybe a third of that production.

The factory burned in 1913 and wasn't rebuilt, although some buildings were left standing for years.

MILE 29.3: KEYSTONE VIADUCT BRIDGE 195.5, DECK PLATE GIRDER AND THROUGH TRUSS, 909 FEET LONG

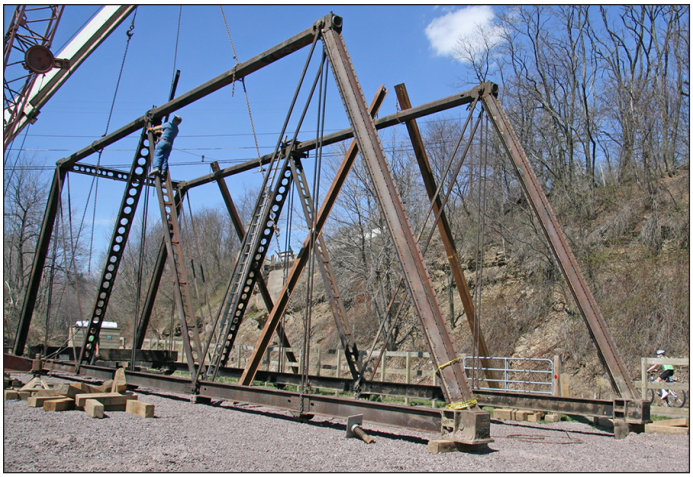
"Viaduct" is just a fancy word for "long bridge." Like all the bridges on the Western Maryland from here to Connellsville, the piers were built to accommodate two tracks, in anticipation of increased traffic that never came. The imposing structure has long been a railroad photographer's favorite with its easy accessibility, its crossing of the B&O, its long sweeping curve, and the fact that the railroad always kept the area around it clear of brush.

If not for the trail, this bridge would have been scrap years ago. The Pennsylvania Department of Transportation wanted to straighten Glade City Road. They perceived the jog between two of the bridge piers to be a hazard, ignoring the fact that no accident had ever occurred there. Ordinarily, since the bridge carried an abandoned railroad, it would have been torn down and hauled off, but because the Great Allegheny Passage was already a going concern, the bridge was saved and modified to carry the trail.

The offending piers were taken down in 2003, but first, the three original girder pairs on top of them were lifted off (see map). A new girder in three pieces was placed atop the existing piers and bolted together on the spot, while they were held up by the old piers. The result was one long 237-foot span that looks remarkably similar to the old one. Once the new structure was in place, the old piers were demolished and Flaugherty Creek Road was straightened to prevent more non-existent accidents. A concrete deck was then installed on the viaduct with the necessary railing. It's almost impossible to tell from up on the bridge where the new section is, and you have to look closely to see the changes from underneath.

You'll notice the deck has a reddish color. That's not an accident. Noticing that the steel from the overhead truss dropped rust, Linda McKenna Boxx, then-president of the Allegheny Trail Alliance, suggested the new concrete be tinted to match. In a wonderful synergistic move, iron oxide recovered from an abandoned mine drainage (AMD) remediation site located across the river from the trail near Sutersville, Pa., was mixed into the concrete as it was poured. The result is the concrete's rusty appearance. The $1,491,906 project was completed in August 2003.

Keystone is built with a 3-degree, 45-minute curve and 3-inch superel-



» After being lifted off its piers, taken apart and trucked to the Meyersdale station parking lot, the Bollman bridge is being reassembled. It'll be moved up the trail and placed over Scratch Hill Road. It was in great shape for being 136 years old at the time.

evation, which means it's banked like the curves on a racetrack. Civil engineers measure curvature in degrees; the fewer degrees, the wider the curve.

Superelevation allows you to go faster around said curve. Centrifugal force makes an object (a train in this instance) want to go straight when it comes to a curve. The faster it goes, the straighter it wants to go. Superelevation makes it harder to fly off into the bushes. I mention this because you can see it quite clearly on the bridge deck. Most of you won't be going fast enough take advantage of it and not fly off into Keystone Gap, but you'll see it again on the bridge at Harnedsville.

Keystone underwent another major change in 2012 as a part of CSX's National Gateway Project. Clearances along the railroad were raised to accommodate cars loaded with double-stacked containers.

Overnight, this span over the railroad was jacked up 18 inches at a cost of about $1.5 million. This explains the ramp at each end of the truss. CSX also donated $25,000 to Somerset County Recreational Trails Association. You'll encounter the National Gateway Project again at Pinkerton and in Pittsburgh.

WHY THE VIADUCTS? Along with Salisbury Viaduct, Keystone Viaduct was part of a clever engineering move that saved the railroad builders a huge amount of money and work. Had they stayed on the south side of the B&O and still held the .85-percent eastbound grade, they would have had to build a bridge and fill more than two miles long and 200 feet high across the Casselman River valley south of Meyersdale. As you can see from the chapter map, they built Keystone at the last possible western foot before the valley widened out. Crossing over and hugging the north side of the valley uphill from the B&O was the much better and cheaper choice. The other but lesser reason they did it this way was go through town and pick up any Meyersdale freight traffic.

Salisbury Viaduct gets the trail back across the river from the B&O, where it will be for the next hundred miles, almost to McKeesport.

SLIDE FENCE REMAINS

Soon as you cross the viaduct, you enter a cut through Brush Creek Limestone. This is what author John McPhee refers to as "competent rock," sturdy enough that the vertical cut has little danger of collapsing. That said, the mangled steel and cable alongside the trail are the remains of the slide fence that protected the railroad in case a slide did happen. The wires in the fence connected to an electric circuit designed to break in the event of a rockslide, tripping the signals to stop oncoming trains and alert dispatchers their railroad was blocked.

The rock through here is also fossil bearing.

MILE 30: WM MILEPOST

Probably the only original Western Maryland milepost the scrappers missed. You can see it on Page 21.

MILE 30.1: BOLLMAN BRIDGE

This is by far the oldest bridge on the trail. Amazingly, it's been obsolete since it was moved from its original location in 1896, and not only does it still exist against all odds, it's in remarkably good shape considering it's a century and a half old.

It and several others like it were built by Wendel Bollman's Patapsco Bridge Co. in 1871 for the Pittsburgh & Connellsville, but when the railroad expanded in 1896, they were too small for the increased traffic, heavier trains, and new double track. Most of the iron bridges were either moved or scrapped, but this one and at least one other were dismantled and moved to Somerset County. Mere happenstance saved it.

It was the correct length (81 feet) to carry a farm road across the tracks and, since the crossing wasn't particularly important or heavily traveled, a sound, already-paid-for 25-year-old bridge fit the bill nicely. It spent over a century there along Route 219 in the shadow of Salisbury Viaduct.

This bridge was out of date even when it was built. By 1870, steel made by the Bessemer process was in widespread use for construction and iron was on its way out. Steel is much stronger than iron and the Bessemer process made it cheaper and easier to make. (We'll tell you about that in the Homestead chapter.)

Compare the light and ornate iron Bollman bridge to the massive steel Keystone Viaduct you crossed a mile or so back. Now you can see the vast advantage that steel has over iron, and the huge changes in engineering practice that took place in just 40 years.

After new Route 219 was finished in 1999, the farmhouse was vacated and Pennsylvania's Public Utility Commission abolished the crossing, which meant Mr. Bollman's bridge would be torn down and scrapped. Local citizens and trail people forged an alliance to save the iron bridge.

After much paperwork and effort, the bridge was moved to its present location in 2007. It was lifted off the abutments, disassembled, trucked over back roads to the Meyersdale train station parking lot, reassembled, moved up the trail, and placed over Scratch Hill Road. There was some illegality involved in the move (Permits, señor? We don' need no steenking permits), but the statute of limitations has long since run out.

» **Wendel Bollman.**
B&O Railroad Museum

WENDEL BOLLMAN

Wendel Bollman (1811-1884) went to work for the Baltimore & Ohio Railroad as a carpenter in 1828. He was one of the first employees of the new company and rose to become Master of Road under Benjamin Latrobe, the Chief Engineer. He was responsible for track, structures, and maintenance,

» **The Bollman bridge at its first location near Ellerslie, Md. It was called Bridge No. 7, built in 1871 to carry the original single-track railroad, which it only did for the first 25 years of its life. It was dismantled and moved to Meyersdale. The crew of the special train to the left documented the whole railroad about 1890. The builder's plate at the top of the arch has been saved and is in good hands.** Collection of Harry Clark

according to historian Herbert Harwood. Like many men who rose through the ranks of the B&O, he was a self-taught; the military academy at West Point was the only engineering school in the country at the time.

Bollman patented the first iron truss bridge in the United States in 1852, at a time when the only practical bridge building materials were stone and wood, both of which had been in use for thousands of years. Stone bridges were expensive to build but lasted for centuries; wooden bridges were much cheaper but deteriorated quickly. Iron was lighter and cheaper than stone and stronger and lasted much longer than wood.

In 1858, Bollman resigned from the B&O to form the W. Bollman Bridge Co., which operated until 1863. Two years later, he founded and operated the Patapsco River Bridge Co., until his death in 1884. His company was one of the first devoted solely to the building of iron bridges, and his designs set the standard for the day.

There's another iron bridge built by Bollman across the canal at Williamsport.

HOMEWORK: If you want to see more about Bollman's bridges, go to loc.gov (Library of Congress) and search "Bollman bridge."

GLADE CITY, UNINCORPORATED

You're riding along the side of the hill above Glade City. Chances are pretty good the settlement strung out along Glade City Road was named for Somerset County's famous Glades, mountain wetlands where several of Pennsylvania's rivers are born. An 1876 atlas of Somerset County called the place Lenhart's Village and shows a half-dozen houses but a 1911 map says Glade City and so it has been ever since.

The Glade City Mine was located here. It was owned by the Savage Fire Brick Co.