

# BETSY—Part II

1902

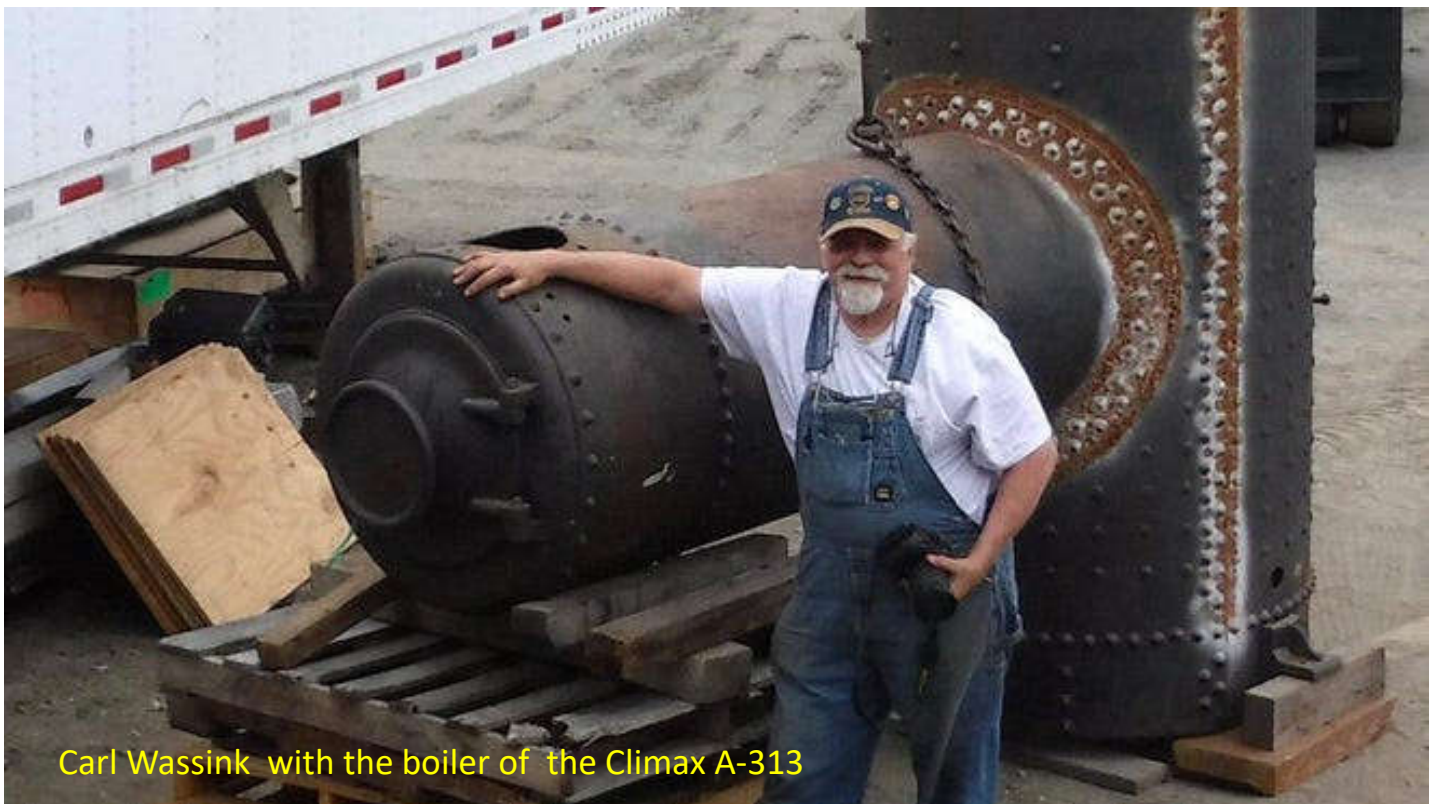
Shawnigan Lake Lumber Co.

The good news is that Carl Wassink of Corry Pennsylvania read my earlier post regarding Betsy, Shawnigan Lake Lumber Co.'s locomotive.

The bad news is that a lot of information was incorrect, and so my thanks to Carl for putting the record straight.

The Corry Railroad and Industrial Leads Society (Corry RAILS) raised more than \$80,000 to buy a 1902 Climax A locomotive and transport it from Council Alaska to Corry PA.

According to Carl, Betsy is a Climax A locomotive as well, with a manufacturer number of 335.



Carl's email is below.

*Neil*

Neil Malbon

Collections Curator, BCFDC

Hi Neil... My name is Carl and I head up the Climax A-313 restoration Project here in Corry, PA, home of all Climaxes. Someday I hope to get out to the BC Forest Discovery Centre to check out the two Climax B's you have there. In the meantime I try to post videos of the 21 existing Climaxes as I get a chance on our Facebook page "Corry RAILS".... the video of your B being pulled out of its winter home has been shared recently.

In looking through your site I came across the photo and your article about "Betsy". I was interested and wanted to read the story. In doing so I came to the belief and conclusion that there are several errors in the article, mostly in the inserted copy of the 1947 magazine article by Gerry Wellburn. A lot has been learned about Climax since 1947 and much of it is contained in the book "The Climax Locomotive" by Thompson, Dunn & Hauff from 2002. Much of that book was based upon the compiled historical information of Walt Casler, from here in Corry, who began working at Climax at age 14 and was the first to write a book about Climax in 1959. You may very well have both of these books in your archives... I would be surprised if you didn't. In Thompson's book, check the story in Chapter 12, starting on page 321, which was written by Darryl Muralt.

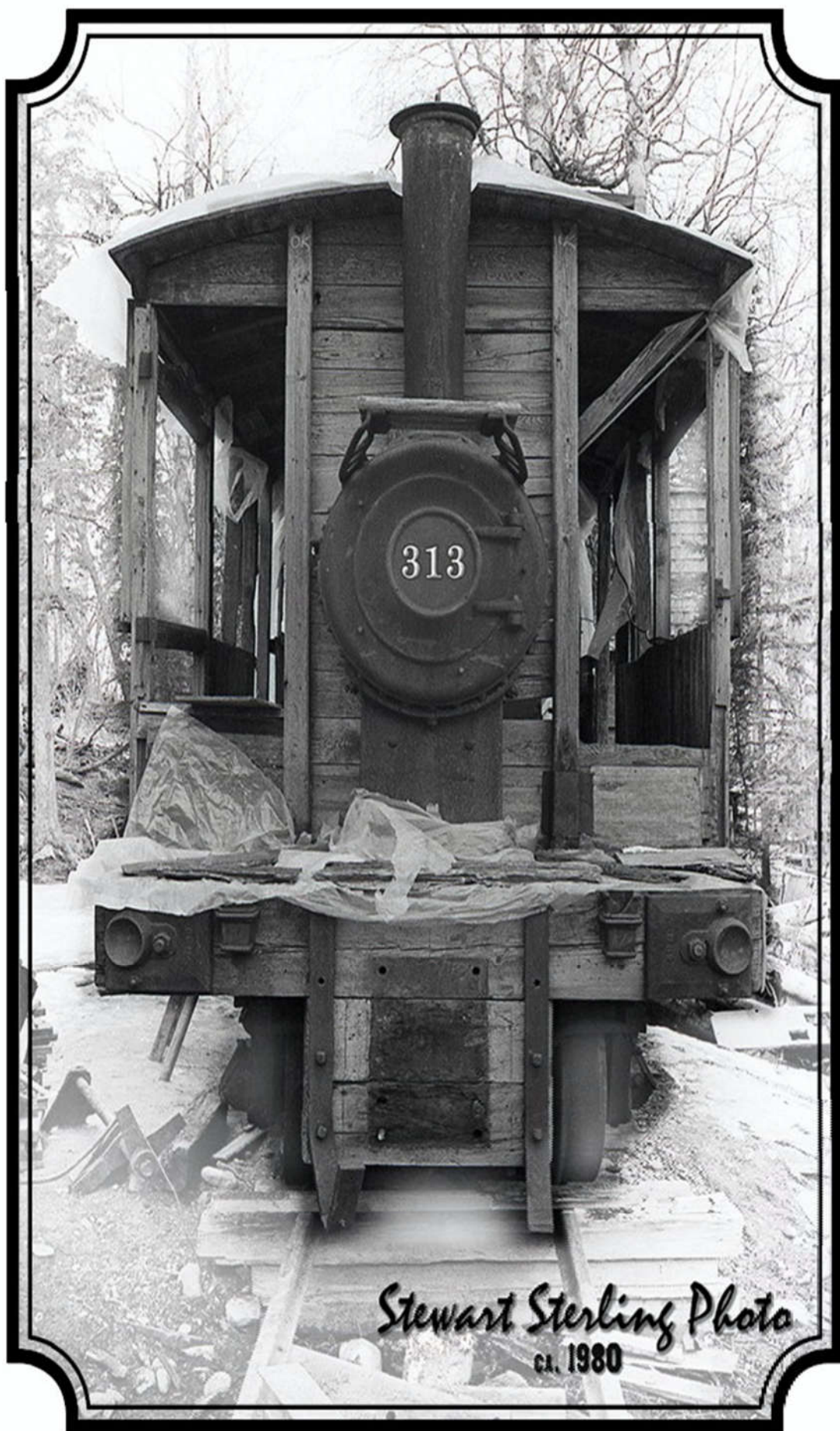
Neil, please don't take offense, I am only trying to help bring the story of the Climax Locomotives to the readers and those interested... How you address this information and the 1947 article is up to you... none of this is of your doing... when Walt Casler wrote his book in 1959, no one in the lower 48 knew that there was still a complete Climax "A" in existence in the Nome area... it would be 10 years later before Chuck Reader would drag it 70 miles into Nome.... and another 10 years before the rest of the world would know about it, when Keith Christenson bought it and shipped it down to the Anchorage area by barge. After 34 years of working on it, Keith died in 2014... and after three years of working to bring her home, Climax A-313 arrived here in Corry last October (2020) and we are now beginning the process of restarting and completing the restoration Keith had begun.... hopefully, three years from now she will run again.

...and so I begin:

To come to the following understanding of the timeline and history of the engines at Shawnigan Lake, it has taken the comparison of stories as told and written by four separate individuals who were there at the time, during the period from 1902 to 1918... reading only one of them leads you to come up with a somewhat different interpretation.

**par.5 - ...and in 1902 they built another locomotive "Betsy"**. Betsy was the second engine at Shawnigan Lake, and she was "assembled" at Shawnigan Lake, but she was not "home-built" as this quote from 1947 might lead you to believe.

**par.6 - ...not one of those factory built sissies that had to run on steel rails. ... built at Shawnigan Lake...** This is where some of the confusion comes in. The word "built" usually has the connotation of being "manufactured", or "built from scratch". "Built" isn't the right term... "Assembled" would be more correct. Saying that Betsy was "**not one of those factory built sissies...**" is not correct for a couple of reasons. She certainly was not a Sissy... but, her origins were right from the factory of Climax Manufacturing in Corry, PA. being a Sissy "**that had to run on steel rails...**" is another matter. Betsy had what are referred to as "Pole Wheels" for running her on 12-14 inch diameter logs, and her gauge was 6ft wide.



*Stewart Sterling Photo*  
ca. 1980



This may seem to be a non-conventional combination, but Climax Mfg. would build what you the customer wanted and ordered... they offered three options for wheel configurations, Standard, Wide Tread Tram-road, and Pole-road wheels. There were different diameters also for different tonnage engines and axle diameters. They also would build from 24 inch narrow gauge to 8 ft. broad gauge. For instance, our Climax A-313 was built as a 36 inch narrow gauge with wide tread Tram-Road wheels, but ran on steel rails instead of 6x6 cut lumber rails. The reason for the wide tread tram-road wheels on steel rails was that on the Seward Peninsula, where A-313 operated, they were used to help keep the engine on the tracks which were built across constantly moving tundra. These wide tread wheels also had a larger flange (deeper). In the case of Betsy, a 6ft pole road already existed and had been working fine with horses, oxen and a previous engine, so no reason to change.

**par.7 - ...her boiler and engine were bought by W. Munsie Sr., when on a trip to the American side... and assembled onto a wooden body framed by George Frayne... etc.** This quote would lead you to believe that Mr. Munsie bought some parts and pieces at random over in America, shipped them to Vancouver and then somehow George Frayne (obviously a master craftsman and mechanical engineer with all of the tools of the trade, at the time) figured out how to put them together, build a substantial wooden frame and structure, and make it into a locomotive that would successfully work in the back-woods for 16 years.... not quite.

So... the photo attached to the article is definitely of a Climax Class "A", and not a "home-built" contraption. There are many distinctive Climax parts visible. Our Climax is Shop Number (Sn.) 313 built in March of 1902... and her sister, Sn. 315, also went with her to the Wild Goose Railroad, headquartered in Nome, AK. They look very similar to this engine, other than the extended cab on the Nome engines, to keep the heat from the boiler in the cab, and not heating the great outdoors of the wild North Arctic region. of the Seward Peninsula. If you look in the book by Dan Thompson (Thompson, Dunn & Hauff), "The Climax Locomotive", beginning on page 321, Chapter 12, the whole chapter is written by Darryl Mural, and on page 323 is the same photo along with another photo, both of Climax "A"-335. Climax was numbering the engines in odd numbers only at the time... so 323 was 11 engines after our A-313 engine. A-335 was built in July of 1902... and the number system was not in perfect sequence... they grabbed a random bronze builder plate out of the bin and that was the number assigned to the build. Further in the chapter is a photo of the engine after it burned in a mill fire in 1918.

I was directed to Robert Turner's book "Logging Rail - The British Columbia Story" and in there are parts of a story as told by Gerry Wellburn where he describes, on page 12, Mr. William Munsie Sr. coming back from "a trip to 'the American side' having ordered a "knocked down" locomotive which was shipped to Shawnigan Lake where the vital parts were assembled onto a wooden body, framed by George Frayne Sr. The machine was a small Climax locomotive of 12 tons... and... designed to run on the pole road.".... "Christened Betsy...".

Here is my best guess on this, without any additional input... Climax Mfg. in Corry had a West Coast sales office and Agent located in the harbor area of Seattle. More Climax engines were sold and located in Washington State than any other state. The Agency eventually became a wholly owned subsidiary, Climax Locomotive Company. The company maintained a stock of parts as well as some engines in stock, and they used other local companies, such as Pacific Car & Foundry, as repair facilities. My guess is that Mr. Munsie ordered a Climax "A", A-335, from the Agency.



Generally, neither the Agency or the Factory, would have had a Class "A" engine with 6ft gauge axels and pole wheels in stock. The axels, bolsters and trucks would have been specially built for this application. This would take at least a couple of months to be built in Corry and delivered to Seattle and BC. The "Knocked Down" locomotive does make some sense. Climax built engines for export as well as for domestic customer. Engines destined for New Zealand or Australia, for example, were built in Corry and then disassembled into major components and crated for shipping. There is a photo on page 316 of Thompson's book showing a Class A, 22 ton steel framed locomotive being disassembled and crated and readied for shipping to Australia at the Corry, PA shop. You can see clearly the steel frame with the boiler still attached. On the following two pages is a transcribed copy of a packing list for a 25 ton Class B being shipped to Australia in 1924. Note that the trucks for the 25 ton B were shipped as two un-crated components and they weighed nearly 5 tons each at 9800#. That is nearly half of the weight of the whole engine... the 25 ton weight is a "wet" weight... full boiler and water tank. The trucks for the Climax A would be a little lighter... the size of the wheels and gears being smaller... but the axels were longer too. I know that in moving the parts for our A-313 the Gradall Ext-dalift we have used picked up the Tee-boiler easily, but the trucks were too heavy for it to lift completely.

Engines being delivered in the US always were accompanied by a "Road Man", who slept on the engine during transport to make sure that it didn't get damaged, lost or shuttled into a rail yard somewhere and forgotten. The Road Man would deliver the engine and give operating instructions to the new owners and help get it ready for working conditions. Usually they would be there for the initial firing of the boiler. Forty ton and larger engines were coupled onto a train with the drivelines disconnected, and if the engine was smaller than 40tons it would be driven up into a gondola car under it's own power, after the fire and ashes had been dumped, and while still under steam pressure, with tracks in the bottom of the car and tied down for shipping.

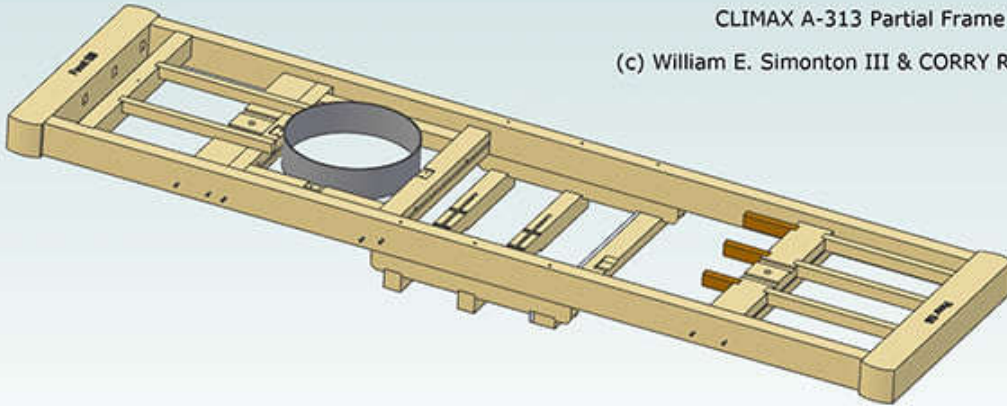
A friend and high-school classmate of mine... his father as a young man worked at Climax in the 1920's... passed on to me that his father had told him a story of accompanying a crated locomotive destined for Australia with instructions to assist in the re-assembly of the engine upon arrival in Australia. He was gone for a couple of months. This seems to have been standard practice with the export locomotives.

So, with the Shawnigan Lake A-335, It would stand to reason, at least to me, that it could have been similarly disassembled and shipped from the factory... the complete wooden frame with all truss-rods being one of the components... the engine and its frame could have been shipped separately, or left bolted in place on the frame with a crate surrounding it, and the Tee Boiler being removed and shipped as a separate component. Eight bolts at the base of the fire box, eight more at the base of the smoke box saddle and eight at the two exhaust pipes, along with some brackets and steam piping and the whole boiler lifts off of the wood frame.

I am guessing that with the Broad Gauge pole wheels and axels, and the remoteness of Shawnigan Lake... with the pole road being on the other side of the lake from the Mill, and assuming that the railroad from the Port where the engine would be delivered on Vancouver Island to Shawnigan Lake, would probably have been steel and standard gauge, making delivery of the fully assembled locomotive a difficult problem. My guess is that Mr. Munsie asked for them to deliver the engine crated and that "His Guys" would handle putting it together. The wooden frame may have been one component and the cab was most likely delivered as a combination of "Lincoln Log" and "Erector Set" kit, along with misc. brackets, and probably with as full of a set of blueprints as Climax could provide. In the Frame there are one or two transverse threaded rods at each crossmember which hold the frame together as well as transverse and longitudinal Truss Rods for strengthening, which included special angled washers and mounting castings. There are angled drilled holes in frame components as well as dadoed grooves and offset rod holes in unimaginable locations on the frame and crossmembers for all of the critical support needed, not to mention the well fitting mortise and tenon joints throughout. My guess is that Mr. Munsie had the utmost confidence in George Frayne's abilities to follow the blueprints and instructions and re-assemble the frame, boiler, cab and engine, if all of the parts were there. What a great find if there were ever photos taken of that re-assembly going on.

**par.8** - This entire paragraph is describing the 2nd "home-built" engine... this is probably describing the re-assembly of Climax Sn. 335 after it's arrival in crates, and describing the engine as having a Tee-Boiler... Mr. Munsie would most likely not have found a "Tee" boiler in Seattle, other than through Climax, if he was looking for one in 1902... unless from a wrecked engine. Calling it "a home-built" engine rather than the re-assembly of a factory built engine is where the confusion lies. The Climax Tee boilers were heavily constructed and not susceptible at all to not holding together as the author insinuates.

CLIMAX A-313 Partial Frame Assembly  
(c) William E. Simonton III & CORRY R.A.I.L.S. -- 6/17/2021



Betsy did remain in service for nearly 16 years until burned in a fire. In the paragraph it mentions it being 24 feet overall and about 12 ton... 24 feet would have been close to the right length for a 15ton "A"... a 12 ton would have been a bit shorter... and a 12 ton Climax Class "A" would have had a Vertical Boiler and not a Tee Boiler. Sn. 335 is listed in Thompson's book as a 15ton locomotive. The Tee boiler had been introduced in the mid 1890's on the 15 and 18ton Class A's.

**par.9** - This paragraph applies to the Climax A-335... which had a 150# boiler (the same as our A-313), double vertical cylinder "marine style" engines (similar engines were also used on both the Heisler and Gilbert Class "A" engines. The one significant part that is missing in this description is that the Climax "A" locomotive had a two-speed open geared transmission, the gears of which are clearly seen below the man-way door, and below Henry McClurg (whistle punk). This is unique and would have been more difficult for a home-built engine builder to duplicate. Those gears are "Slow" and "Slower".

**par.10** - describes some of the Shawnigan Lake operation, including the "Walking Dudley". Here I turn to Robert Turner's book and the paragraphs by Turner and Wellburn where on page 11 Wellburn describes the building of a machine called "Dudley", or "Walking Dudley". The Shawnigan Lake contraption consisting of a vertical boiler, a steam engine of some sort with a crankshaft and some gears and using a chain drive connected to one axel. This engine was coupled to one car with a 16 foot reach to haul logs to the dump pond. The sprocket on the axel was too large and dug into the ground and log ties. The boiler threw out too many sparks which caused some major fires burning up the pole tracks, and the chain was always stretching and breaking. Described as being too dangerous, when it was abandoned it was hauled out and buried in the swamp. There is a sketch of the Dudley done by Wellburn on page 10 of Turner's book.

Another BC company, but on the mainland, was McNair Fraser. They had a totally different unit which they also called "Walking Dudley", pictured on page 14 of Turner's book, which was a steel frame vertical boiler donkey with two trucks of 4 wheels each, built by Willamette as a "Cable Locomotive", it used an engine with a vertical boiler and windless winch (A Steam Donkey) mounted securely on a flatcar.

The ends of the cable wrapped around the windless were secured by cables to the tracks at the top and bottom of the incline, and using the cable and windless winch type system to pull or lower itself, and loaded cars, or just a string of logs skidded between the poles, up and down the grade from the loading pad to the log dump pond. A totally different type of engine and company, but also called "Walking Dudley".

**par.11 - ... she handled two log cars...** according to the young 1940's Forester who wrote the description in Darryl Muralt's chapter 12, 6 Climax logging cars were ordered along with Betsy, with three being transported to the log dump while another 3 were being loaded. So, not only was Betsy safer, but she was a bit faster at 3 mph and hauled 3 times as much... 3 cars instead of 1.

**par.12 - ...Betsy was uncoupled and additional logs "Parbuckled" with a line attached to her.** this is using snatch-blocks and cables to assist the logs up ramps to stack on top of the first or second layer of logs, which were easily rolled onto the log cars. Just using the engine as power to pull the logs up an incline using snatch blocks, cables and a simple pulley system, the log being the pulley.

**par.13 - ...The log cars built at the sawmill...** This is referring to home-built log cars prior to the arrival of Betsy and the 6 new Climax factory log cars.

**par. 14 - The track was built with logs 12 to 14 inches in diameter on a 6 ft gauge.** Climax built pole wheel locomotives from narrow gauge up to and including 8 ft broad gauge.

**par. 15 - What did Betsy cost?** the engine might have been in the neighborhood of \$2800 and add the cost of the detached logging trucks.... that might be the other \$2000.... but it is doubtful that this \$4865 included track or water tank... those would have already existed when Betsy was bought anyway... to use for Dudley, prior to "Betsy". At some point in the early years the poles were replaced with light weight steel rails A-335 was re-gauged to Standard gauge with standard wheels instead of the pole wheels. In 1910 Shawnigan Lake purchased a 25ton Climax B engine (Sn.1057) which ran as No. 2 into the mid-1920's. This is the Climax engine on display inside the Museum at BCFDC

That's it from on this end Neil.

All the best,

Carl Wassink

Corry, PA 16407

Corry RAILS