

The

Chambers
Bridge



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The Chambers Bridge

The history of the Chambers Bridge actually begins more than two decades prior to its construction when J.H. Chambers acquired an interest in Ashland Manufacturing Company in Ashland, Oregon. Chambers, then in his early 40s, had relocated from Nebraska to seek his fortune in the forest products industry of the Pacific Northwest. He relocated his family to southern Oregon, and watched his business prosper.

By 1906, his sights had moved farther north, to the Cottage Grove area, and in February of the year, he incorporated the Chambers Lumber Company with Fred Russell and W.J. Rogers, a pair of San Francisco investors. Chambers' portion of the incorporation was partially funded by the sale, to the new company, of a mill that he owned on the Row River, near Dorena, southeast of Cottage Grove. The mill was substantial for the period, capable of producing 25,000 board feet (25M) of lumber per day.

The business changed rapidly in 1906. In March, the company announced that they would start the Alca mill that had been purchased from the Pacific Timber Company. The mill had double the capacity of the Dorena mill, 50M, and had access to the Southern Pacific Railroad. On April 18, an earthquake and subsequent fire destroyed most of San Francisco, creating a tremendous demand for wood to rebuild the city. Fred Russell moved his family to the Cottage Grove area and in his stated capacity as both president and manager of Chambers Lumber Company, took more of a day-to-day interest in the operation of the company. It is interesting to note that during this period both Russell and Chambers are shown in the press as being "President and Manager" of the company. It is also worthy of mention that the press listed the capacity of both mills to be 35M each. Given the physical separation of the mills, it is likely that Russell oversaw the Dorena operations while Chambers refurbished the Alca mill.

Chambers' next expansion was in 1910 when he acquired a mill in Latham and substantial timber from

A.L. Woodard. The mill operated for only a short time. In mid-1911, both the planing mill and the sawmill burned with an estimated loss of over \$300,000. Quick to rebound, Chambers started rebuilding the mill by fall 1911 while operating his mill in Ashland and a mill at Rujada (U.S. Logging Company) in which he had a partial interest. The Latham mill was to be slightly larger than his other mills with a capacity of about 65M per day.

During the next several years, J.H. solidified his position, both at Latham and along the Row River. In late 1917 it was announced that he had assumed control of the Oregon Pacific and Eastern Railway which served his Row River assets. A setback occurred when the Latham mill burned. The economics of the period were such that there was some question as to whether or not he would rebuild the mill, but in the end, Latham was reconstructed with a stated capacity of 100M. The new mill was in operation by December of 1918.

The next several years were relatively uneventful, none of the mills burned down. Chambers did, however, lose several million board feet of standing timber to forest fires. In late 1923, in a move that surprised many people, Chambers sold the mills, the OP&E and much of his Row River holdings to Anderson and Middleton Lumber Company. With little delay, he bought the Skelley Lumber Company in Drain, Oregon and announced plans for a new mill to be built on the Skelley property. That plan was almost immediately scrapped when he was able to secure a significant amount of government timber near the Lorane Valley, close to



This air photo, probably taken in the late 1940s, shows the mill complex at its peak. Visible in the upper left corner is the covered bridge. In the middle left is the waste burner, connected to the mill by a conveyor that spans the river. The mill itself is in the center with the dry kilns and lumber storage below it. In the lower right are the tracks of the Southern Pacific and Highway 99. *Photo, Casey Carlson collection, TimberTimes*

John Harvey Chambers

... was born in Fairfield, Illinois on January 6, 1861. By the 1880s, he had moved to Iowa, then Nebraska where he successfully plied his profession as both a merchant and a banker. In 1881, he married Mabel Van Valin, with whom he would spend the next 59 years until her passing in 1940. The couple spent their early years in Nebraska where their son, Victor, was born. In 1902, the family came to Ashland, Oregon where Chambers embarked on a four-decade, highly-successful career in the timber industry.

Not content to spend all his hours as a timber baron, he found time to serve multiple terms as Mayor of Cottage Grove and spent time on both the city and county financial committees. His fraternal organizations were the Masonic Lodge and the Shrine. His politics tended to be conservative. One of his last wishes was to be able to see Thomas Dewey elected President.

His character was unimpeachable. He kept his mills

running through hard times at relatively low profit to keep the payroll flowing into Cottage Grove. During one of the all-too-frequent labor disputes of the 1920s, he saw one of his long-time employees walking the picket line at his mill in a stereotypical Oregon downpour. Aware that the man suffered from rheumatism, Chambers went out to encourage him to seek dry clothes and warm drink. The picketer refused, stating that his relief had not yet arrived. The story continued that Chambers took the picketer's sign, walking the picket line at his own mill until the relief man arrived, allowing his suffering friend to seek shelter. True or not, the story illustrates the opinion most people had of J.H. Chambers.

Chambers died in 1944 at age 83, never having seen Dewey elected President, and missing the start-up of his last mill by only a few weeks. His legacy in the timber industry of the Northwest will not be forgotten.

substantial timber holdings that he had accumulated over the previous decade.

By late 1924, surveyors were plotting a railroad from Cottage Grove to the Lorane Valley, where a mill was to be located near the timber. The company was now being called J.H. Chambers and Son, with Victor Chambers taking a role in planning and operations, though it was clear that J.H. still ran the company.

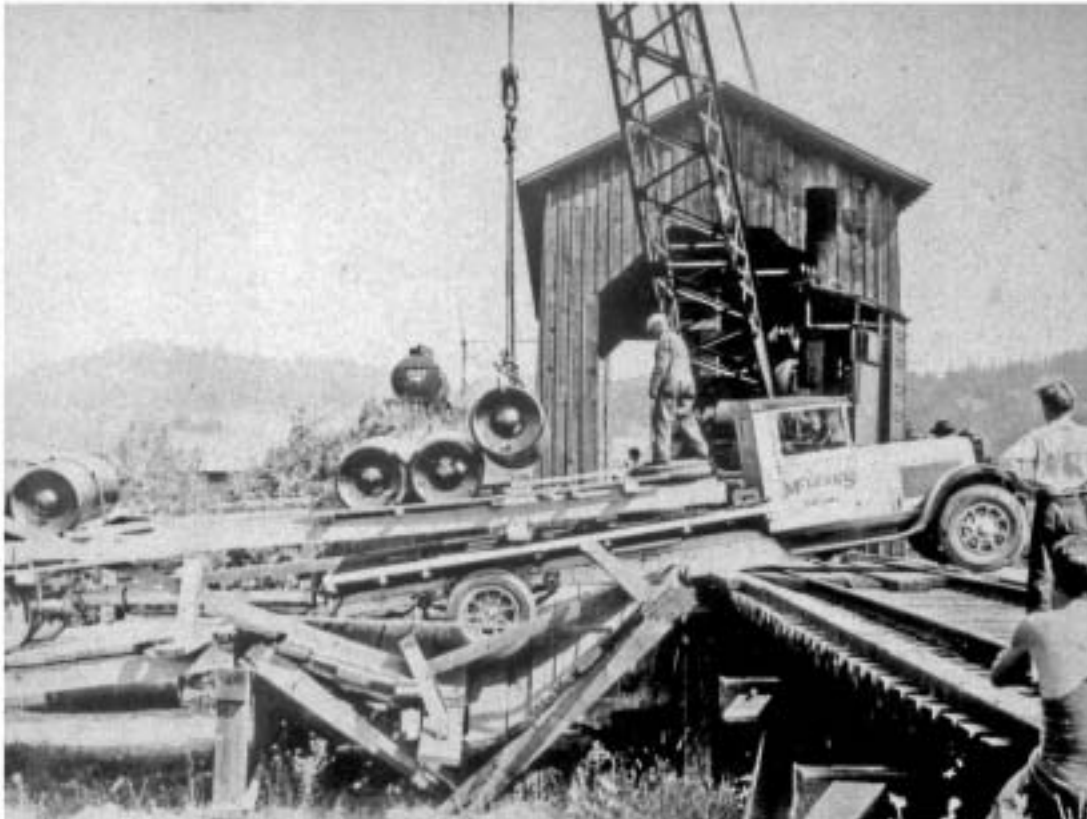
Work on the railroad actually started in early 1925 and in June the *Timberman* reported that the first major bridge on the line, a truss over the Coast Fork of the Willamette River, had been completed and track-laying was proceeding west of Cottage Grove. And so, the Chambers Bridge came to pass.

It was soon decided that the location of the mill should be Cottage Grove and work commenced on a 100M mill which was put into operation by late 1926. Over the next decade and a half, the railroad was extended from 5 miles to 25 miles and had numerous spurs into the timber. In 1940, a small-log mill was constructed at Lorane to handle logs less than 24 feet long and less than 40 inches in diameter. This mill

proved to be very important when, in 1942, disaster struck, and the Cottage Grove mill burned. Wartime restrictions made it almost impossible to obtain machinery to rebuild the mill, but the Chambers's located enough equipment to rebuild, and in late 1944, the mill came on line – a few weeks after J.H.'s death. During the rebuilding process, lumber production was shifted to the Lorane mill by adding additional shifts.

Victor continued to run the company for the next two years, selling it in 1946 to William H. Daugherty (Lorane Valley Lumber Company). Operations continued until late 1950 when the mill, again, burned. Daugherty had no desire to stay in the business, and sold the remains of the company to W.A. Woodard. Woodard moved sawmill operations to their existing mill and scrapped the railroad, thus ending the Chambers era in Cottage Grove.

For some reason, the Coast Fork bridge was left in place. For some equally inexplicable reason, it survived the ravages of time. It now remains as a monument to J.H. Chambers and his four decades of leadership and influence in the Cottage Grove area.



The roadway at the west end of the bridge was originally supported on trestlework. It was apparently not sufficiently stout to support this truck loaded with gas cylinders. The resulting collapse blocked both the road and the railroad. To facilitate a reopening of the rail line, the Chambers' Ohio steam crane was dispatched across the bridge to clean up the mess. Visible to the left of the bridge is a railroad tank car used to supply fuel to some of the equipment. *Photo, Casey Carlson collection, TimberTimes*



These three photos, taken in 1952 during the scrapping of the railroad, show the covered bridge as it appeared at the end of its working life. The siding was relatively intact, and the roofing was complete. The water tank was located to serve either the log dump track (left in lower photo) or the mainline. *All photos, Ivan Ergish collection, Oso Publishing Company*



Rehabilitating the Bridge

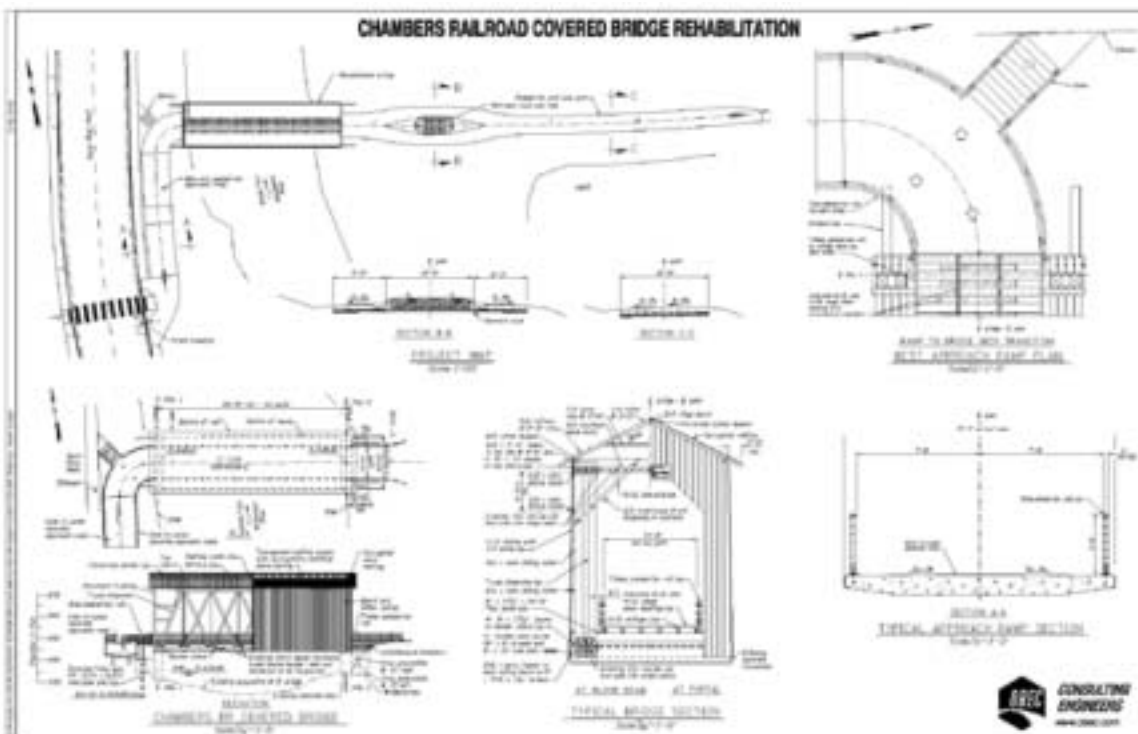
The last train rolled over the Chambers Bridge in 1951, and for the next 55 years, the structure sat unused and deteriorating, somehow escaping the dismantling or destruction which had claimed almost all other railroad, covered Howe truss bridges in the United States. The historical and cultural significance of the bridge had not escaped public notice and, in 2006, the City of Cottage Grove acquired ownership of the bridge and sufficient property on both ends to incorporate it into a trail and park system. In 1979, the bridge had been placed on the National Historic Register (No. 79002081) ensuring that the private owners of the structure needed to be sensitive to its importance. By the time the city acquired the structure, it was the last remaining, fully-covered, railroad Howe truss bridge west of the Mississippi.

Largely due to the reason that the bridge had no economic purpose after 1951, little or no maintenance was performed on the structure and by the time Cottage Grove assumed full ownership of the bridge, significant deterioration had occurred. The board and batten siding which had completely covered the exterior was more than half gone and the roofing was in very poor condition. The city immediately hired OBEC Consulting Engineers to do a detailed evaluation of the bridge and to recommend a course of action to preserve/rehabilitate the structure.

The bridge's railroad heritage was both a curse and a blessing. The large timbers necessary to support the railway loads allowed significant rot to occur without causing complete failure of the bridge. Additionally, vandals had attempted to start a fire on one of the lower chords. Thankfully, it did not catch and while damage was done to the timbers, the bridge was not lost. The decay of the timber resulted in a significant lean of the entire structure in the upstream direction. After the initial survey, it was evident that immediate action would be necessary to preserve the resource.

The National Historic Covered Bridge Preservation Program awarded \$1,315,370 to the City of Cottage Grove for rehabilitation and converting the landmark into a bicycle and pedestrian bridge. These monies were made available in fiscal year 2008 with a required Cottage Grove match of \$136,000. The city immediately embarked on a fund-raising campaign to secure the matching funds.

Reconstruction of the bridge has taken about two years, with virtually all the wood components having been replaced and new roofing installed. The finished appearance of the restored structure is essentially identical to the original bridge, without the railroad track, and with careful maintenance should serve the city for many decades to come.

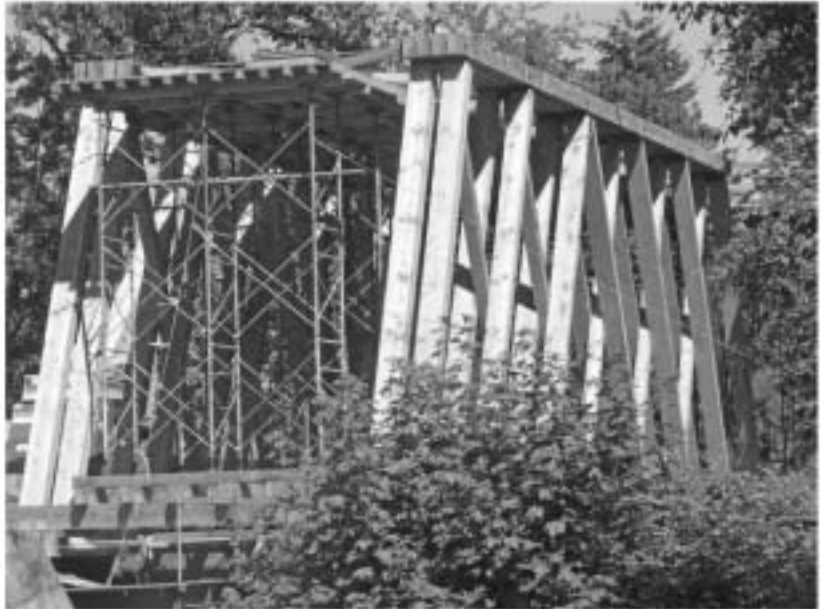




Above: The tilt of the structure is clearly shown in this photo taken in 2009, prior to disassembly of the old bridge. Rot above the piers on the upstream side caused the bridge to take on a decided list.



Above, right: By the time that the bridge was placed into public ownership and slated for restoration, little remained of the siding. The roofing was also in bad shape and a fire had been started on the upstream lower chord, damaging the timbers.



Above: Reconstruction of the bridge took place on the old railroad roadbed just east of the river. This eliminated any need to work over the water and allowed access to both the inside and outside of the trusses. In this photo, taken in July 2011, scaffolding has been erected to facilitate the installation of the upper cross-members and diagonals.



Left: By August 2011, the framing for the bridge ends had been constructed and the roof rafters were being installed. The I-beams in the foreground are launching rails to permit the bridge to be pulled across the river and seated on its foundations.

All photos, Kent Hutchens

William Howe and his Truss Design

By all accounts, William Howe lived an interesting life. Born in Massachusetts in 1803, records indicate that he resided in Warren, Spencer, and Springfield during his short, 49-year lifespan. Though all of these towns are within 35 miles of each other, Howe's willingness to move in response to jobs was counter-culture in an era when most people stayed very close to home and family. Most documents indicate that after some schooling he became a farmer, and followed that vocation most of the time until 1838, when he changed his profession to that of a architect or building contractor. During that period, builders were often designers so the titles architect and contractor were used interchangeably.

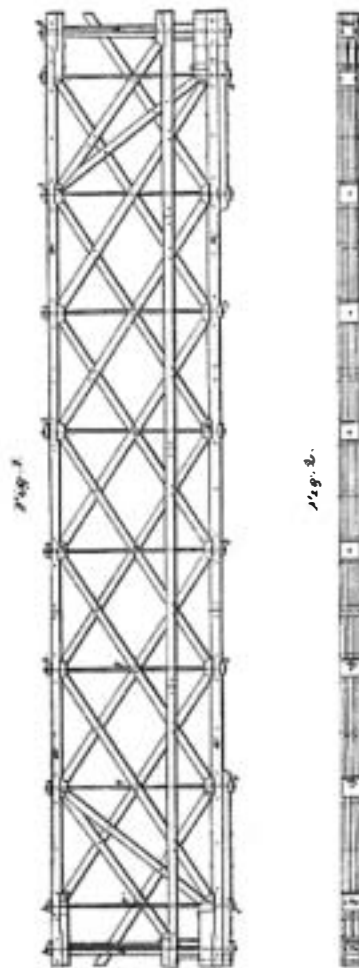
It was in the late 1830s that Howe was given a commission by a church to construct a large hall that was to have a significant clear span. Unsatisfied with current truss designs, he repaired to a local tavern to contemplate solutions to the problem. It is said that there, either scratched into, or sketched upon a convenient wall, William Howe laid out the design that would bear his name. He was not naive about the importance of his truss design, and applied for and received a patent for his truss in 1840. An improved design was patented in 1846 and a renewal of the original patent was granted in 1850.

From its invention and patenting in 1840, until the style finally succumbed to more modern designs and materials in the mid-1920s, William Howe's truss was a mainstay for bridge builders and architects throughout the world. While originally devised for architectural purposes, the modular aspect of the design lent itself to both road and railway bridge applications.

On railways, the Howe truss fell into three general types: the pony truss, where the trusses were not as tall as the trains and there was no cross-bracing at the top of the trusses; the deck truss, where the rails and ties were carried completely above the trusses; and the through truss, where the trains went between the trusses and under a series of cross-braces at the top of the trusses. There were covered variants of all three types, though in the case of the pony and deck trusses, the cover generally only enclosed the truss structure and not the cross-bracing. In the case of the through truss, most were open, but there are examples of partially-covered (trusses only) and fully-covered varieties, such as the Chambers Bridge.

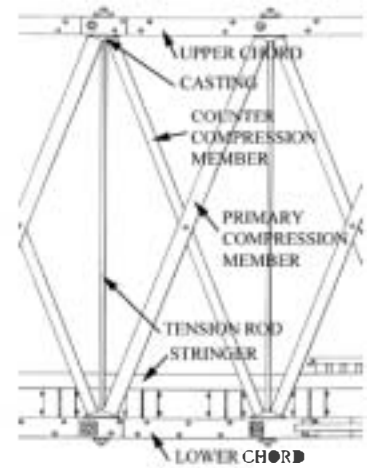
The design appealed to railroads for several reasons: first, the chords were essentially modular, with heavier loads being accommodated by adding members (three to seven was common) and clear spans as long as 150 feet typically used components no longer than 85 feet; second, the angle castings and tension rods could be standardized, limiting the inventory of replacement parts; third, the compression members were square-cut and of uniform length, allowing prefabrication and pre-treatment with preservative; fourth, the relatively modest size of the components allowed the construction of the bridge without large cranes or elaborate launching structures (although falsework was required).

*W. Howe.
Truss Bridge.
Patented Aug. 3, 1840.*



The genius of Howe's design was that he used materials where they worked best - steel or iron for the vertical tension members; wood for the angled compression members; and a modular scheme for the chords. These features, coupled with simple wood joinery, made for an easily erected and simply maintained structure.

While construction of the railroad Howe trusses essentially ended in the 1920s, a significant number of this type of bridge remained in rail service until the 1970s and 1980s. Unfortunately, few examples survived into the twenty-first century.



Two other railroad Howe trusses exist in the Northwest. Shown above is the Dungeness River span, located just west of Sequim, Washington. The photo on the left was taken just before it was removed from service in the mid-1980s. On the right is a photo taken during its construction in 1915. It is now the centerpiece of Railroad Bridge Park. Below are photos taken in 2002 of a partially covered Howe truss originally constructed for an interurban line that ran from Spokane to the Pullman area. The bridge is located near Colfax, Washington and is in private ownership. *Photos, Hauff collection*



This document was written and edited by Steve Hauff. It could not have been assembled without the research and resource assistance of Kent Hutchins, Arlen Sheldrake, Glen Comstock, Phil Schnell, the Cottage Grove Historical Society, and the City of Cottage Grove. Production assistance by Mary Hauff.

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