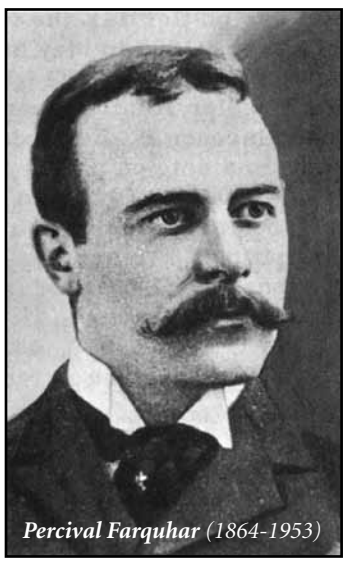
The ALDON Express

WINTER 2013

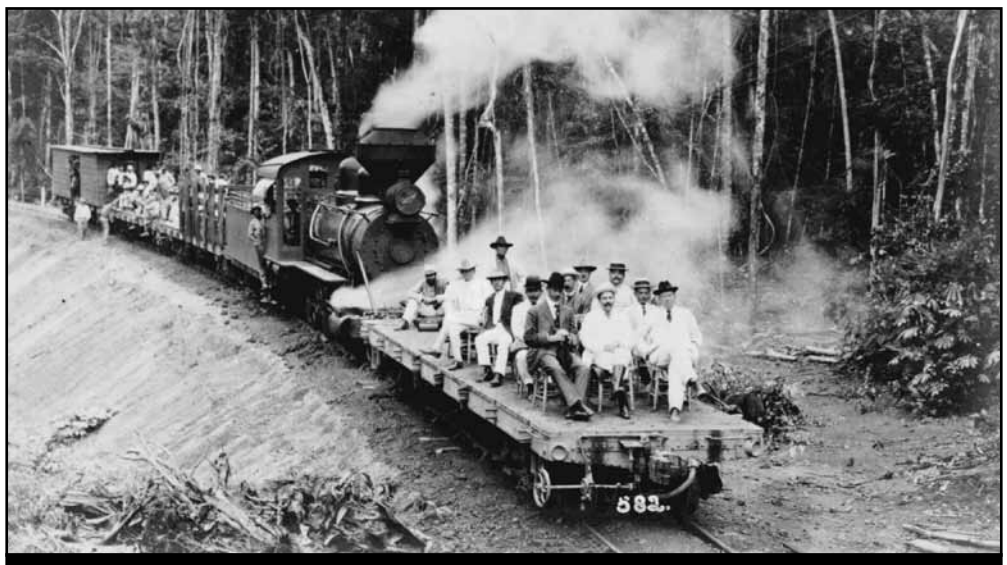
"The Mad Mary": *One Man's Obsession*



Percival Farquhar (1864-1953)

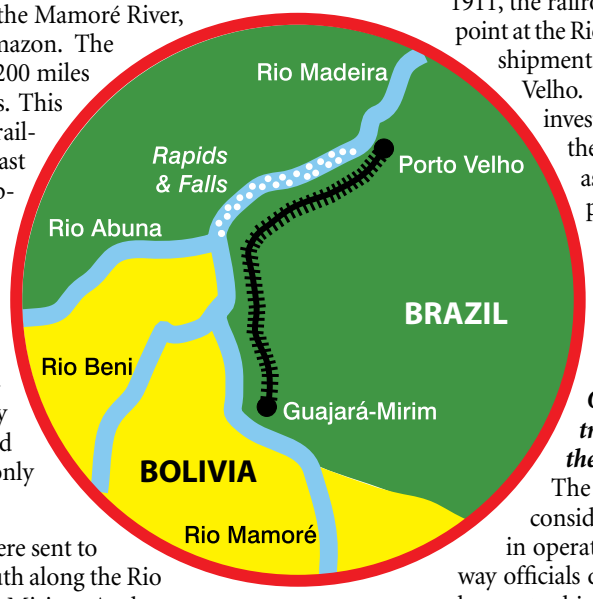
In the early 20th Century, an American financial tycoon named Percival Farquhar was the largest private investor in Brazil. Backed by European investors, Farquhar's syndicate had controlling interest in Brazilian railways, river steamers, ports, and streetcar lines. He dreamed of creating a rail network that would link all corners of South America and open the continent to development. His boldest achievement was the building of the Madeira-Mamoré Railway, a 227-mile long narrow gauge line cut through the dense tropical forest of northwestern Brazil. His workers called the railroad "The Mad Mary," and it did seem like madness; but Farquhar persisted. It took five years to complete, at a cost of several thousand lives and 33 million 1912 dollars (equivalent to $787 million today).

Rubber was the economic underpinning of the Madeira-Mamoré Railway. In the early 1900s, the development of the automobile industry created a huge demand for rubber for tires. At that time, Brazil and its neighbor to the west, Bolivia, produced 90% of the world's rubber supply. The only competition was Asian rubber grown on plantations in Malaya, Ceylon, and Sumatra, but they had only recently begun to export.



1. Government and railway officials inspect the newly-opened Madeira-Mamoré Railway in 1912

Bolivia was especially rich in rubber trees, but the landlocked nation had no rail access to Pacific coast ports. It was forced to ship its rubber through Brazil via the Mamoré River, which flows into the Madeira, a major tributary of the Amazon. The Mamoré was navigable for its whole length, but the first 200 miles of the Madeira was blocked by a series of 19 falls and rapids. This made shipping rubber by boat costly and treacherous. If a railroad could be built from the Mamoré River to below the last falls of the Madeira, the problem would be solved, and rubber could be easily shipped down to the Amazon.



In 1907, when Percival Farquhar sized up this opportunity, he saw enormous profit potential in operating such a railroad. He gambled that the threat from Asian rubber was far enough in the future that he could build the railroad with revenues from the rubber monopoly and then further develop this remote region. Farquhar was willing to go deeply into debt to finance his jungle railroad. He believed it would be considered an American engineering triumph second only to the Panama Canal, which was then being built.

Construction began in August 1907. Surveying parties were sent to plot the right-of-way west along the Madeira and then south along the Rio Mamoré, to the starting point of the railroad at Guajará-Mirim. At the eastern end of the line, at Porto Velho, a company town was established as headquarters. Everything had to be built from scratch: a modern hospital, dormitories with wide screened porches, rail yards, and office buildings. A modern port was built to receive the tons of supplies and equipment that began pouring in from the United States: steel rails, steam shovels and pile drivers, side-dumping gondola cars, and locomotives. Farquhar used high wages to lure engineers away from the Panama Canal as well as doctors, nurses, and other skilled workers. Even the unskilled workers — local Brazilians and laborers from the West Indies, Italy, Germany, and Spain — were paid above average wages.

The working conditions were terrible: torrential rain and mud, enervating heat and humidity, with mosquitos, spiders, snakes and scorpions to add to their misery. Hundreds of discouraged workers deserted, some disappearing into the jungle to die. Until the hospital was in full operation, the sick lists were filled with men shivering from malaria and yellow fever, their feet often swollen from insect bites. Each day three men died of disease or injury. The "Mad Mary" would ultimately cost 3,600 lives.

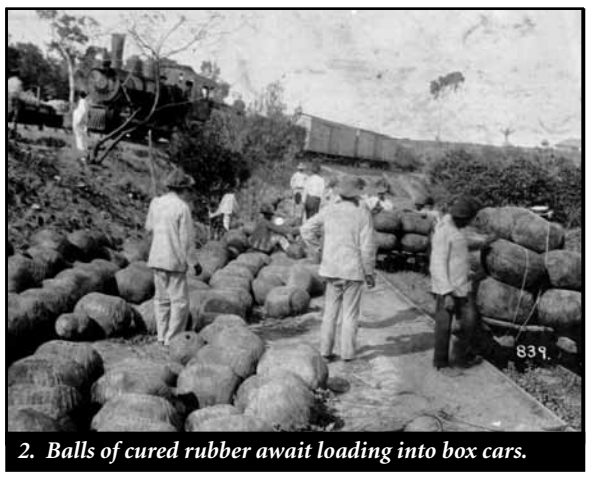
3. A Brazilian beetle was big and creepy ...but not deadly like the malarial mosquito.

In the rainy season, the Madeira could rise forty feet above its banks, ripping away tracks and wooden trestles. Tracks had to be repeatedly re-located to get above the floodline. The swamps proved so bottomless that the engineers resorted to making floating roadbeds from "mattresses" of criss-crossed tree branches filled in with tons of gravel.

4 Mudslide caused by the flooding of the Madeira

Month by month the clearing, grading and track-laying went on. A year into the project — September 1908— only 8 miles of track had been laid west of Porto Velho. By May of 1910, 56 miles of track had been laid. By 1911, the railroad reached the half-way point at the Rio Abuna. Bolivian rubber shipments began moving to Porto Velho. Farquhar reported to his investors that the revenues for the year 1911 would be an astounding 140,000 British pounds sterling (equivalent to 43 million 2012 U.S. dollars). He estimated that revenues for 1912 might more than double that.

On April 30, 1912, the track gangs finally reached the western end of the line. The Madeira-Mamoré Railway, once considered impossible to build, was now in operation. On September 7, 1912, railway officials drove a golden spike to symbolize the great achievement. Farquhar cabled his congratulations, confident that his success would lead to even greater ventures.



2. Balls of cured rubber await loading into box cars.

But no one foresaw how quickly Asian rubber — lower in cost and higher in quality than the South American variety — would come to dominate the world market. 1912 proved to be the last good year for Brazilian-Bolivian rubber exports. By 1914, their market share had plummeted and so had the revenues of the Madeira-Mamoré Railway.

In that same fateful year of 1914 the Great War broke out in Europe. The international banking system was disrupted and Farquhar lost his financial leverage. His investors saw their South American railroad holdings evaporate. By October 1914, Farquhar's numerous enterprises had gone into receivership. Control of the railway passsed to a British consortium. In 1919, after the war had ended, the ever-confident Farquhar returned to South America to organize the steel industry in Brazil. He died in 1953 of Parkinson's Disease at age 89.

The Madeira-Mamoré Railway never recovered from the collapse of the rubber monoply in 1914. It limped along carrying local freight and passengers, and the region retreated into somnolence.

During World War II, the railroad temporarily profited from a resurgence of Brazilian rubber exports when America and its allies could not obtain rubber from Japanese-controlled Far East sources.

Today, the Madeira-Mamoré Railway is largely abandoned. At Porto Velho, less than five miles of track remain intact for running an occasional tourist train. A few rusting 1912-era locomotives and some skeletonized rail cars stand on weed-grown sidings. A group of local business-people are trying to preserve what remains of the railroad. But the march of progress is unrelenting: there is pressure to tear down the 1912 railway station and build a shopping center on the site.

5. A palm tree grows through the remains of a 1912-era box car.

Hevea Brasiliensis — the native Brazilian rubber tree —

grows abundantly in the Amazonian region, but the trees are widely-scattered in the mixed species forest. Harvesting the rubber involved cutting a diagonal gash in the bark of the tree and attaching a cup to catch the oozing white latex. Rubber gatherers were forced to walk many weary miles every day from tree to tree to collect the latex in a barrel strapped to their backs. At night, they smoked the latex on a spit over palm-nut fires to create 75-pound balls of blackened latex which would then be shipped down the Amazon to market. The rubber gatherers led a slave-like existence, were paid a pittance for their labor, and were cheated by storekeepers for supplies. The rubber exporters grew rich on the trade, and employed private armies to enforce production quotas.

6. Harvesting latex

7 Cooking rubber ball

Works Consulted

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Photos

Black and white photos (1,2,3,4,7) all by Dana B. Merrill. from Photography Collection, Miriam and Ira D. Wallach Division of Art, Prints and Photographs, The New York Public Library, Astor, Lenox and Tilden Foundations.the Dana B. Merrill Collection, New York Public Library.

Box Car Skeleton (5). Erroll Uys. http://www.erroluys.com/WalkingWiththeGhostsoftheDevilsRailroadinBrazil.htm

6. Masterfile

Un-numbered photos, public domain.

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Aldon products to make the work go smoother, with less strain, and more productivity

See short video clip for products with a red box around image: **www.aldoninfo.com/videos**.

Whack 'Em Chocks

Railroad wheel chocks with reinforced handles . If the chock gets stuck under the wheel you can hit it with a hammer without bending the handles. Ask for the "Red-Handle Chock."

Stay Clear Chocks

Keep your head and hands away from the rail car when placing wheel chocks. Handle length 44".

Magnetic-Base Holder

Just plunk it down on any rail surface — exposed or flush rail. Rare earth magnets hold sign in place ... even in a high wind. Wt. 7 lbs.

Leverage When You Need It

HATCH KEY™ Pry Bar for covered hopper car hatches. Pops open frozen hatches.

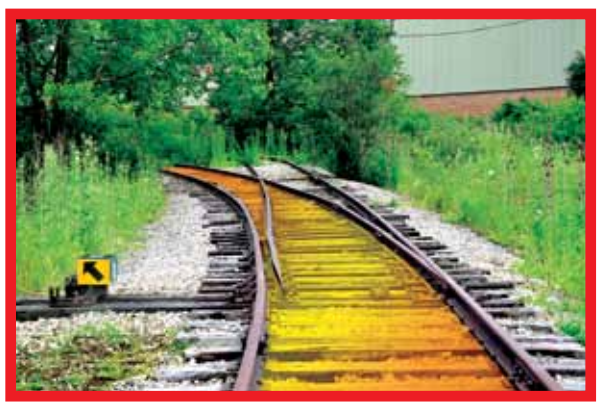
EASY THROW switch handle replaces heavy ball handle. Loop handle gives multiple hand grips.

Tank car pry bar. Much better than a crow bar.

Pop-Ups

MOUSE TRAP. Foot operated, spring loaded sign holder. Step on pedal, sign goes up. Step on pedal again, sign falls down.

A Truly Clear Switch Target



Switch Cube™ Indicator. See at a glance how the switch points are lined. Fits all switch stand models.

A Truly Clear Clearance Marker

Don't foul the switch when shoving freight cars in a siding. Bright yellow cone marker (for exposed rail) and slab marker (for flush rail) bolts to tie or to paving.

Swing the derail block and derail sign will go up or come down automatically. Ensures that sign will properly reflect the position of the derail on or off the rail.

A Truly Portable Derail

Sabertooth™ Portable Derail weighs only 35 lbs. No wrenches needed to install. Safety hook bites into tie to keep derail from sliding.

Scissor-Action Tie Snugger

A more efficient way to secure a replacement tie for re-spiking. Takes the place of old-fashioned nipping bars. Grab tongs, operated by a hand crank, pull tie up against rail base so rail can be spiked firmly.

Walk-In Wheel Block

Walk-In Wheel Block. Keep hands and body clear of trailer when placing aluminum wheel block under tire. Chock sign is more visible to driver in truck cab.

Railroads can carry anything

You wouldn't want to see this load in the next lane on the Interstate! Fifteen flat cars in the middle of a mixed goods freight train are carrying 80-foot-long pipes to a gas pipeline site. The three-layer stacks of pipe are held in place by stout steel bands.

Flat cars can range from 65 to 106 feet long; the longer flat cars require articulated wheel sets at each end of the car to get through curves. Very heavy and very tall loads are carried in depressed center flat cars to get under bridges and overpasses.

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