

### Open House at the Blueberry Mountain Railroad

Dennis and Carolyn Rose held a second open house this year to fill an open date in September. It was

one of those warm beautiful days that we often experience in our area during late summer. The Rose's have continued relandscaping around their house.



Blue Berry Mountain Saw Mill



Lunch Time



### The Rainhills Trials of 1829

**Editor's Note:** The Rainhill Trials were an important turning point in the development of railroad service. The following article is taken from several Wikipedia articles and other internet sources.

The Rainhill Trials were an important competition in the early days of steam locomotive railways, run in October 1829 in Rainhill, Lancashire (now Merseyside) for the nearly completed Liverpool and Manchester Railway.

When the Liverpool and Manchester Railway was approaching completion, the directors of the railway ran a competition to decide whether stationary steam engines or locomotives would be used to pull the trains. The Rainhill Trials were arranged as an open contest that would let them see all the locomotive candidates in action, with the choice to follow. Regardless of whether or not locomotives were settled upon, a prize of £500 was offered to the winner of the trials. Three notable figures from the early days of engineering were selected as judges: John Urpeth Rastrick, a locomotive engineer of Stourbridge, Nicholas Wood, a mining engineer from Killingworth with considerable locomotive design experience and John Kennedy, a Manchester cotton spinner and a major proponent of the railway.

## Rules

Locomotives that were entered were to be subjected to a variety of tests and conditions. These were amended at various points, but were eventually nailed down to:

- The weight of the locomotive, with its full complement of water in the boiler, shall be ascertained at the weighing machine, by eight o'clock in the morning, and the load assigned to it shall be three times the weight thereof. The water in the boiler shall be cold, and there shall be no fuel in the fire-place. As much fuel shall be weighed, and as much water shall be measured and delivered into the tender carriage, as the owner of the engine may consider sufficient for the supply of the engine for a journey of thirty-five miles. The fire in the boiler shall then be lighted, and the quantity of fuel consumed for getting up the steam shall be determined, and the time noted.
- The tender carriage, with the fuel and water, shall be considered to be, and taken as a part of the load assigned to the engine.
- Those engines which carry their own fuel and water, shall be allowed a proportionate deduction from their load, according to the weight of the engine.

- The engine, with the carriages attached to it, shall be run by hand up to the Starting Post, and as soon as the steam is got up to 50 psi (3.4 bar), the engine shall set out upon its journey.

- The distance the engine shall perform each trip shall be one mile and three quarters (2.8 km) each way, including one-eighth of a mile (200 m) at each end for getting up the speed and for stopping the train; by this means the engine, with its load, will travel one and a-half mile (2.4 km) each way at full speed.

- The engines shall make ten trips, which will be equal to a journey of 35 miles (56 km); thirty miles whereof shall be performed at full speed, and the average rate of travelling shall not be less than ten miles per hour (16 km/h). (Note: The only other passenger railway in the world at that time, the Stockton and Darlington Railway, had an average speed of only about 8 miles per hour (13 km/h).)

- As soon as the engine has performed this task, (which will be equal to the travelling from Liverpool to Manchester,) there shall be a fresh supply of fuel and water delivered to her; and, as soon as she can be got ready to set out again, she shall go up to the Starting Post, and make ten trips more, which will be equal to the journey from Manchester back again to Liverpool.

- The time of performing every trip shall be accurately noted, as well as the time occupied in getting ready to set out on the second journey.

## Entries

Ten locomotives were entered, but on the day the competition began — 6 October 1829 — only five locomotives actually began the tests:

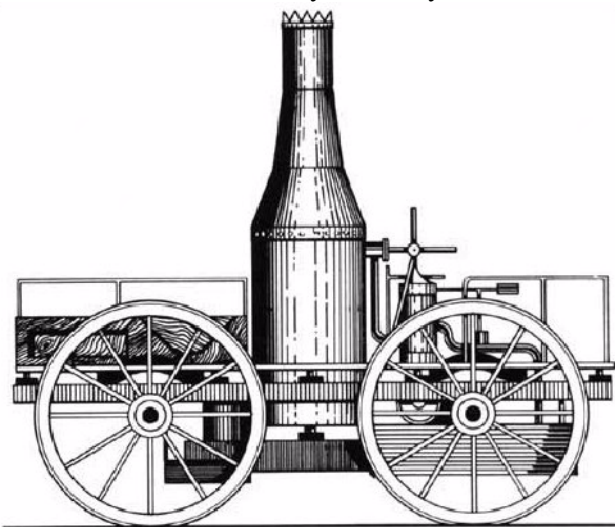
- **Cycloped**, built by Thomas Shaw Brandreth. (No Image available.)

- **Novelty**, built by John Ericsson and John Braithwaite.

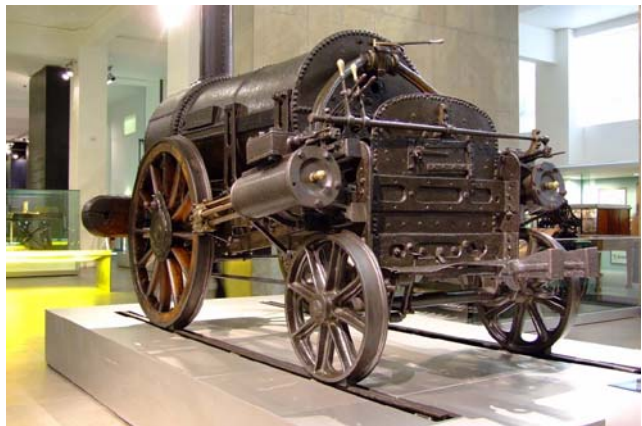
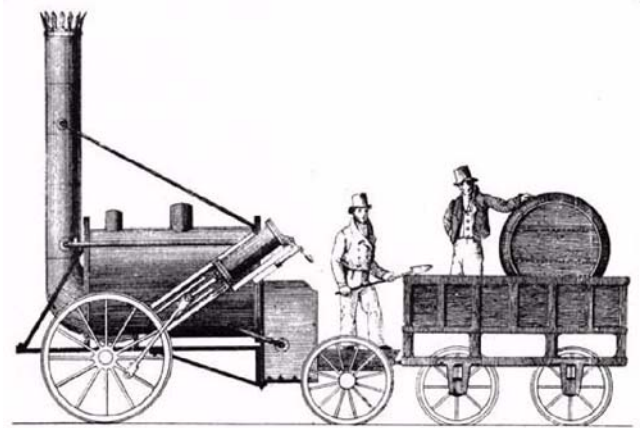


Working replica of **Novelty** at the Museum of Science and Industry, Manchester. Standing on the locomotive are Mr & Mrs Braithwaite, Mr Braithwaite is a descendant of the locomotive builder.

- **Perseverance**, built by Timothy Burstall.

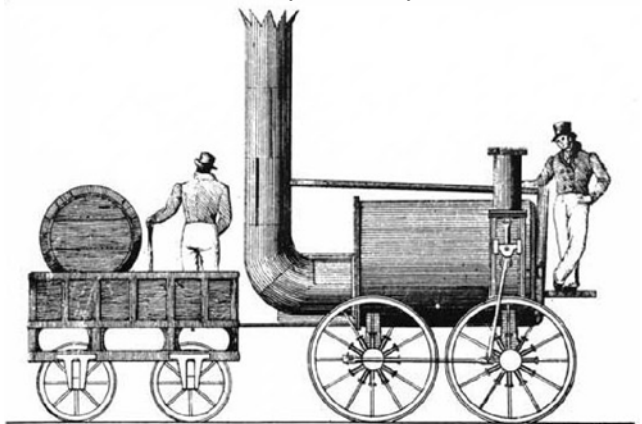


- **Rocket**, built by George and Robert Stephenson.



The preserved remains of the **Rocket** at the Science Museum in London, England. A beautiful replica of the Rocket is on display in its original condition in Nuremberg. A sectioned replica of the Rocket is at the National Railroad Museum Annex in Shildon, England.

- **Sans Pareil**, built by Timothy Hackworth.





Replica of the Sans Pareil

## Competition

Locomotives were run two or three per day, and several tests for each locomotive were performed over the course of several days.

The Rainhill stretch of the railway was very level for a mile or so: a perfect site for the Trials.

**Cycloped** was the first to drop out of the competition. Built with “legacy technology”, it used a horse walking on a drive belt for power, and was withdrawn after an accident caused the horse to burst through the floor of the engine.

Next to retire was **Perseverance**. Damaged en route to the competition, Burstall spent five days repairing it. When it failed to reach the required 10 miles per hour (16 km/h) on its first tests the next day, it was withdrawn from the trial. It was granted a £25 consolation prize.

**Sans Pareil** nearly completed the trials, though at first there was some doubt as to whether it would be allowed to compete as it was 300 pounds (140 kg) overweight. However, it did eventually complete eight trips before cracking a cylinder. Despite the failure it was purchased by the Liverpool & Manchester, where it served for two years before being leased to the Bolton and Leigh Railway.

Sans Pareil means, roughly, ‘Without equal’ in French. A replica of the Sans Pareil is in the Transport Museum in Nuremberg during the exhibition “Adler, Rocket and Co.”

While a capable locomotive for the day, its technology was somewhat antiquated compared to George

and Robert Stephenson’s Rocket, the winner of the Rainhill Trials and the £500 prize money. Instead of the fire tube boiler of Rocket, Sans Pareil had a double return flue. To increase the heating surface area, the two flues were joined by a U shaped tube at the forward end of the boiler; the firebox and chimney were both positioned at the rear same end, one on either side.

The Sans Pareil had two cylinders, mounted vertically at the opposite end to the chimney, and driving one pair of driving wheels directly – the other pair were driven via connecting rods, in the typical steam locomotive fashion.

At the Rainhill Trials, Sans Pareil performed very well but had a strange rolling gait due to its vertical cylinders. The ‘blast’ from the blast pipe was, in Hackworth’s trademark style, very strong, so most of the coke was expelled out of the chimney unburnt; and it was this more than its antiquated design that caused its abysmal fuel economy. It was pulled out of the competition because of a cracked cylinder. After the trials, the Liverpool and Manchester Railway bought Sans Pareil as well as Rocket, and it exceeded Rocket’s service life by serving on the Bolton and Leigh Railway for many years.

A replica Sans Pareil locomotive built in 1980 is now preserved by the National Railway Museum at its new Shildon Locomotion Museum annex, also home to what remains of the original locomotive.

The last drop-out was **Novelty**. In complete contrast to Cycloped it was cutting-edge for 1829, lighter and considerably faster than the other locomotives in the competition. It was accordingly the crowd favorite. Reaching a then-astonishing 28 miles per hour (45 km/h) on the first day of competition, it later suffered some damage to a boiler pipe which could not be fixed properly on site in the time allotted. Nevertheless it continued its run on the next day, but upon reaching 15 mph the pipe gave way again and damaged the engine severely enough that it had to drop out.

So, the **Rocket** was the only locomotive to complete the trials. It averaged 12 miles per hour (19 km/h) (achieving a top speed of 30 miles per hour

(48 km/h) hauling 13 tons, and was declared the winner of the £500 prize. The Stephensons were accordingly given the contract to produce locomotives for the Liverpool & Manchester Railway.)

### **Rocket 150**

In 1980 the “Rocket 150” celebration was held to mark the 150th Anniversary of the trials.

A replica of **Novelty** was built for the event, which was also attended by replicas of **Sans Pareil** and **Rocket** (plus coach). Several other later notable locomotives were also on display at this event.

### **Restaging**

In a 2002 restaging of the Rainhill Trials using replica engines, neither **Sans Pareil** (11 out of 20 runs) nor **Novelty** (10 out of 20 runs) completed the course. In calculating the speeds and fuel efficiencies, it was found that **Rocket** would still have won fair and square, since its relatively modern technology made it a much more reliable locomotive than the others. **Novelty** almost matched it in terms of efficiency, but its firebox design caused it to gradually slow to a halt due to a build up of molten ash (called “clinker”) cutting off the air supply. The restaged trials were run over a section of line in Llangollen, Wales, and were the subject of a BBC Time-watch documentary.

This restaging should not be taken as accurate as there were major compromises made for television and because of the differences in crew experience, the fuel used, the modifications made to the replicas for modern safety rules, modern materials and construction methods, and following operating experience. Sensible comparisons were made between the engines only after calculations took into account the differences. None of the replicas are without major differences from the 1829 originals.

### **Tom & Susan Miller’s Rio Grande Railroad Complex**

What a treat to be invited to Tom & Susan Miller’s estate on August 28, 2010. This invitation has been extended annually since 2002. There have been regular articles in our newsletter since then. The

most extensive article with pictures appeared in the September 2009 and August 2008 newsletters (back issues are available on our RCGRS WEBSITE or from the newsletter editor).

Tom worked many years to build a grand 7.5-inch gauge railroad. He then removed his barn and built a large new building as a home for a large beautifully detailed world class F-scale (1:20.1) railroad that captures the flavor and in some cases actual scenes on the Cumbers and Toltek Railroad under steam power. He also found time to acquire and build an extensive American Flyer “tinplate” railroad (S-gauge). This year has seen the completion of his F-scale project and the results are awesome to behold.

Tom’s 7.5-inch gauge railroad features 12,000 feet of track, a 30 foot tall by 400 foot long trestle with a through Howe truss center span and a fully lined tunnel that is quite long. His shop facilities; Wow! It is a machinist’s dream with computer controlled lathes, milling machine, and drill press. It has all the machines one would need to fabricate railroad equipment from the ground up. He keeps it so clean you could almost eat off the floor! The weather was great, and everyone appreciated the wonder that Tom and his wife Susan have created.

Tom mentioned that he is going to try to sell his land, house, and RR. He is not using a broker, and feels it may take as many as 10 years to find the right buyer. He now has a house in Arizona where he winters. His new interest is golf which he plays 6 days a week.

### **Railroad Movie Saturday Night October 23**

Time: 6:00 p.m. preshow; 7:00 p.m. main event

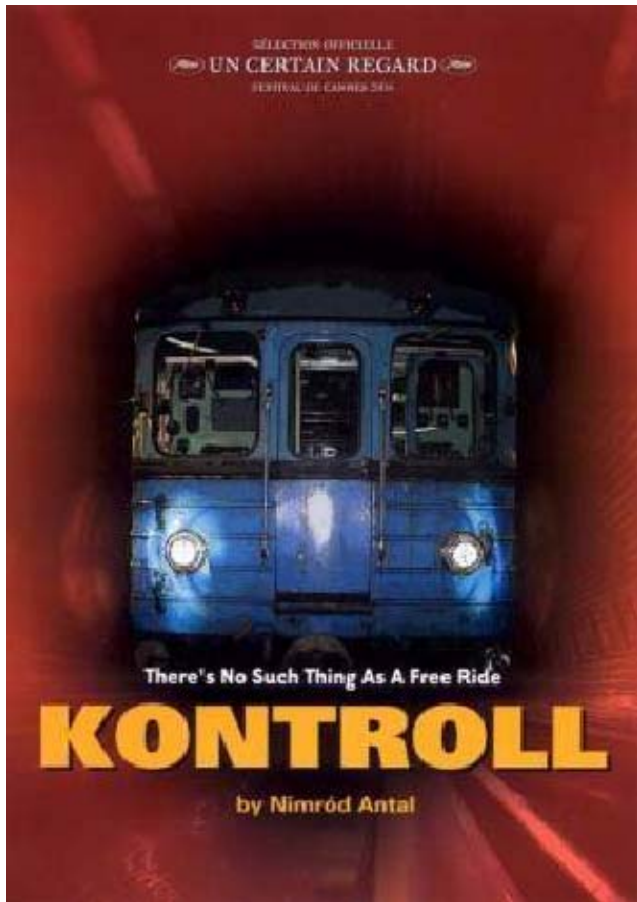
Max’s Fanno Creek Brew Pub  
12562 SW Main St. Tigard.

The Fanno Creek Pub has good food & drink at reasonable prices and will put in a dedicated server for groups bigger than 10 and with of course no outside food or drink. This location is on the south end of Main St. Tigard just off 99W and should be easy to find for most club members.

The movie to be shown is **KONTROLL**; a Hungarian language with English subtitles that is not suitable for children or some adults but is perfect for Halloween nightmares.

Please RSVP to Jan Zweerts via the Yahoo club web site or leave a message at 503-247-7531.

Seating is limited to 28-30 members due to sight-lines in the backroom.



A review of the movie is below:

Ghost trains and ghostly characters, figuratively speaking of course, are what run through the perpetual night of this underground metro system. Bulcsú's (Sándor Csányi) life that once was, on the surface, where the real people go home after work, who go to the movies or a fine restaurant is now replaced by the dark, cold and solitude arena of his new dwellings. Him, and his motley crew of ragtag metro ticket Kontrollers must patrol the trains that run these City dwellers back and forth and with daily ritual, check that no one dare come down into their world for a free ride. With indifferent passen-

gers, a possible love interest, a regime set on competition and to top it all a mysterious serial killer at large, Kontroll is a dark and bleak comedy of the world of the ticket inspector, who, in the end must keep this Metro system running. If not, what would be the worst that could happen, if they ever lost control? Dare you ride here for free, too?

The next Railroad Movie Night is in the planning stages for Saturday, November 6, 2010 with a theme of "There will always be an England". Main feature will be the comedy "Titfield Thunderbolt". Preshow of English trains and/or trams that I am still looking for DVDs of, anyone have any?

There will be no Railroad Movie in December because we will be Hosting the Annual Christmas Ships Parade on Friday December 10th depending on work and wife, more info later.

Jan & Rae near the  
Oregon Slough Bridge  
MP 8.8 BNSF Fallbridge Div.

## **Track Laying Party at the Lakeview & Boulder Railroad**

A big thank you from Dianne and me goes out to all who participated in Saturday's track-laying work party. We both so enjoyed seeing all who came over to help us out, and enjoy the beautiful day. I have enclosed some pictures of the work crew and appreciate everyone's individual contributions which were too numerous to mention individually.

We both look forward to sharing our new layout with the rest of our club on Saturday, October 16th at the annual Halloween-theme open house/quarterly business meeting. Plan now to decorate your favorite car in a Halloween theme to bring along and hook on to the every growing consist of spooky railroad items.

I found a couple of items left behind which need claiming, please:

- 1 pair of yellow work gloves
- 1 small blue razor saw for cutting track.

If either of these items are yours, please let us know. Thanks again everyone! It is really wonderful how

everyone pitched it to make our backyard layout more complete, and closer to the finish line. It will never be completely done, but I feel the hardest parts are behind us now. Now it is someone else's turn to ask for our club's help in making your backyard train layout a reality. I know I'll be there to lend a hand for any member who needs my help. Sincerely yours - Jeff and Dianne Lange



The work crew must be fed. Jerry Clark cooks the burgers while Steve Cogswell takes a water break.



The work crew is finished for the day

## Schedules & Timetables

It is our Society's policy to attempt to have an event or open house on every second Saturday of the month. Other and additional dates during a month are also available and encouraged.

**Editor's Note: The deadline for the November Newsletter is October 27th. The Newsletter editor will be away October 19 to October 27th.**

**Halloween Trains October:** Location and Host Needed.

**November 13, 2010, Saturday, 10:00 a.m. to 4:00 p.m.:** Annual RCGRS Luncheon/Banquet; Canby Adult Center 1250 S. Ivy St. Canby, OR Same caterer as last year.

Clinics, Workshops, Lunch, Model Show and Raffle. Changes from last year: Model Show: (not a contest). Bring your latest creations and show them off. Raffle: If you have won two prizes and win a third, you can exchange for a prize you already won, or pass.

Raffle Prizes include:

Books, Videos, fun stuff, gift certificates.

USA boxcar

Aristocraft snowplow

USA Reefer

Loco tote

2 Aristocraft U25B locos

1 Aristocraft Rogers 2-4-2 loco

Each Reservation gets one raffle ticket.

Additional tickets 1 for \$1, 12 for \$20 when purchased in advance.

We are looking for persons who would like to put on a clinic, contact Nick Kelsey or Tom Gaps.

**December 10, 2010, Friday Evening:** Jan and Rae Zweerts open house and viewing of the Christmas ships. Rae will provide vegetarian, regular, and hot chilli.. Beverages, including beer and wine, and finger-foods from guests are welcome.

Jan & Rae Zweerts 1859 N. Jantzen Avenue, Row O, Slip 9 (Last House), Portland, OR, Phone: 503-247-7531. The Christmas ships will be sailing past their house that same evening. Jan's European railroad which is on a floating deck next to the houseboat will be in operation.

Jan's Layout: Fast, frequent Swiss style service reducing the need for automobiles and aircraft. Features that makes RR unique? European style cars and engines.

Layout info for those who want to run their own trains Yes, but be aware of water hazard. Divers are NOT standing by! 5% grades at Swiss Jct. Can members run trains? Any limitations, i.e., no steam? Ask control operator for permission. Hook & loop couplers and Kadees. The minimum track radius is 2 foot radius with 12000 series LGB switches. Track power with electric blocks permits independent control of 3 trains, plus a switching district. Is the layout FN<sup>3</sup> compatible? Probably not.

House conditions: 20% slope on the ramps to the river; wear non-slip shoes and warm coats to observe Christmas Ships outside. All children 10 years or younger need to wear life jackets (Jantzen Beach Moorage rules). We have a small supply on hand, bring your own if available. Reminder: walkways can be slippery if it has been raining. Please keep this in mind when deciding what shoes to wear (low heel and non-slip walking shoes are better).

Also, put your keys in your pocket or purse before starting down the walkways. The river is anywhere from 3-30 feet deep. The likelihood of retrieving your keys if they are dropped overboard is pretty close to nil!

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