

# SWANTON PACIFIC RAILROAD

Number 74

Cal Poly

July 1999

## On Track

With your director,

Ed Carnegie



Summer is now upon us and the days are flying by. We had two workdays in June and much work is being accomplished with all aspects other than the washout. During the workday final preparations for a six-yard concrete pour between the machine shop and the turntable were made by our track crew, Bill and Butch Floyd, Cosmo DiFrancesco, Bob Wilkinson, Tom Vertel, and Andy McLean.

On Monday Fitz, Tony and Anthony Pratkanis, Tom Vertel, Mary Ann and myself worked the six yards of concrete as best as we could on a very warm day.



On Saturday afternoon the track crew took two lots of ballast down the track to finish work started two weeks ago. Since we were on site with tools we decided to replace approximately thirty ties along with underlayment and spread the ballast. A clean up of overhanging limbs and weeds along the right away was also accomplished.

The rest of our crew for the work weekend were electricians under the able leadership of Randy Jones. Wiring in the machine shop was carried out by Randy, Fitz, Geoff, and Andy. Electrical panels in the roundhouse were installed by Tom and Marty, while the electrical panels in the carbarn were installed by Cosmo DiFrancesco and Bob Kubiaticz.

Some of you may have noticed our new containers on the grounds. One is just east of the carbarn. Shelves are being installed to hold supplies used in the carbarn. This will greatly reduce the congestion in the carbarn. The second container has taken the place of the semi-trailer down in the College Station area. It has been filled with shelves and the stored material that was in the trailer. A ramp was built that allows the lawn mower to drive into the storage unit and further reduces the carbarn congestion.

We have also ordered and received a used Marvel #8 bandsaw. It is now located at Cal Poly and will be completely rebuilt before being delivered to Swanton.



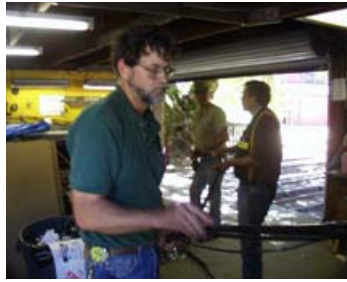
On equipment, a hydraulic power unit was installed on the Cal Poly built shear brake.

Our continual battle against the weeds was fought by our grounds crew including a massive spraying job followed by Mary Ann trying to save good plants that were accidentally sprayed as weeds. A selective spray has been used on our lawn to try to remove the pesky burr-clover.

Saturday morning, Bruce Sherman, Ed and Randy made some final decisions on the brake rigging for the new ballast car. Bruce found it very difficult to weld without electricity since the electrical power was under construction in the machine shop! Marty worked on the steam

engines painting and reinstalling the injectors in the 1912.

On Sunday following the board meeting, a group of stout hearted electricians pulled wire from the main panel in the machine shop to the distribution panel in the carbarn. This was



a very long pull and was made in two sets using the motor car to pull from a junction box on the wall in the machine shop to the main distribution panel.

Then the truck crane was used to pull the wire across the driveway from the machine shop to the carbarn.

Regarding our education program, Tony Pratkanis, with assistance from his father Anthony, has put together a study plan of instruction for the Cal Poly interns. We are now waiting for a time to implement this program. There are fifteen interns on the ranch this summer and this program would introduce them to our railroad.

As part of our Education and Safety Program the Board took action to establish a uniform set of hand signals. A new handbook will be developed and distributed to our members.

Now for the continuing saga on our sagging track. . .

A request for a permit has been sent to Fish and Game. We are very patiently waiting for a reply after our eight contacts with them, followed by no response. Our last contact led us to believe that we will have to wait 60-90 days for a response rather than the normal 30 days. If all agencies operate with the same degree of urgency we will not be allowed to do anything on

**New Members**

Robert and Rose Ann Bell	Portola Valley
John and Barbara Bierie	Danville
Lee D. Edwards	Livermore
Bill Hughes	Morgan Hill
R. E. Hunt	Desert Hot Springs
Chuck Jordan	Concord
Michael R. Land	San Francisco
Scott McGhee	Los Altos
Donald Nice	Fair Oaks
Ken Peterson	San Jose
Harvey Sandoval	San Juan Bautista
Chuck Schipper	Carmel Valley
Richard Toulson	Los Altos

On behalf of the entire organization we welcome each of you into our "train family" and we certainly look forward to seeing you at some of our next events. Many of our members may not recognize you right away so please introduce yourselves so that we can get to

Safety Simon Says:

**Don't be one foot away  
From the end of a perfect day.**

**Wear boots!**

**Redhouse Reservations**

The Ranch Director has been working with the Railroad to ensure that we have some space available at the Redhouse for our workdays. However, I do need to know at least one week in advance whether room reservations are needed or not. That way I can better coordinate with Wally Mark to make sure that things move smoothly. If you do not call in to reserve a



**PUBLICITY**

and

**EVENT COORDINATION**

Mary Ann Carnegie and Fred Vertel

Calendar of events

- Friday July 9 Prep for Saturday's BBQ
- Saturday July 10 BBQ and Run for
- Saturday July 24 Golden Spikes Run/  
second workday
- Saturday August 14 Work weekend
- Saturday August 28 Work weekend
- Sunday August 29 Host Cal Poly Alumni/  
train run

Remember to get your reservations in for the July 10<sup>th</sup> BBQ and if you will be at Swanton on Friday night for dinner. Be sure to let MaryAnn or Fred know that you want to be included.

Train runs, tours of the roundhouse, etc. will be offered for the July 10<sup>th</sup> event. We are expecting a great turnout and will need everyone's assistance to make it successful. Committee chairs will be contacting you to

**THE GENERAL**

On Wednesday, August 18, "The General", a classic silent film starring Buster Keaton will be playing for this one evening only at the Stanford Theatre in downtown Palo Alto. The Stanford Theatre is rated as the top theatre in the United States for viewing classic and Silent Films, having been renovated to its original 1920's style complete with a fully operational Wurlitzer Theatre Organ that accompanies each silent film.

Last year a number of our members got together and attended a similar performance at what is usually a packed house. The restoration of these silent films as well as the theatre itself has been the personal project of young David Packard and , working with the extensive film archives of UCLA, have produced restorations that are outstanding to see. The silent films have none of the typical jerky, light blotched appearance that we so often have become accustomed to seeing. The "blacks" in these all black and white productions are pure velvet...a real experience to see and hear as well as with the live Theatre Organ Accompaniment. If you have never experienced "The General" or Buster Keaton's comic talent, this is the only way to do it.

Last year, after the performance, our group moved to the Peninsula Creamery to enjoy sundaes and sodas within a building virtually unchanged since it opened at the time these silent films were originally shown. If you're interested in reliving this bit of nostalgia, contact Fred Vertel for arrangements.

ftvertel@aol.com or 650-968-9056



**Tools, Tools, Tools**

By  
Mark Cooper



OK class, take out your pencils, its Quiz Time! How many of you remember the tool color code from last month's article? Try your hand:

- Blue = \_\_\_\_\_ house
- Green = Machine \_\_\_\_\_
- Yellow = \_\_\_\_\_ Barn
- Red = \_\_\_\_\_ Crew

Now, this time I was easy on you, but NEXT month... no hints!

As promised, this month's theme is how to order that favorite tool, the one you really wish we had to unbolt the flangedanger from the whatchamacalit. Well, going up in each area is a Tools Wish List, and all ya gotta do is write it down.

What happens after that is pure bureaucracy. I have an authorization from our Beloved Director Ed each year to spend X dollars on tools, and in theory I can simply buy the tool, no more questions asked. But in practice, there are more requests than my year's dollars, so I like to run the list by him to see if he has any wisdom about priorities.

Next, I buy that tool you put on the list, assuming it made the Directorial priority cut. My only problem is that I use my Master Card, and I can only go in the hole so far each month. Now Ed has been really good about taking my receipts and promptly getting me a check so that I can pay my bills. But between my submission of receipts and the check actually getting deposited back in my account, a month or more can elapse easily.

The Quicker Way: Get a verbal OK from Ed, buy the tool yourself, give Ed the receipt, and then wait for the check to come back to you. If you do this, PLEASE let me know so I don't double-purchase a tool!

Next Month: Tool Safety Keeps Ourselves and the



## ANSWERS TO MacDERMOT's "WYE" PUZZLE

A few months ago, I wrote about an early proposal by MacDermot for the layout of his Overfair Railway at the P.P.I.E. That version included an end-of-line terminal at the southeast corner of the exposition's grounds. A drawing shows the loading platform at the very end of the track and after a fairly short wye turnaround. I asked how MacDermot intended to turn the engine around and relocate it at the head of the out-bound train.

Elmer Stone suggested that MacDermot may have been considering the technique of a "drop switch", which is also called a "flying switch" by the train crews. In this method, the engine and tender are uncoupled from the following cars while the train is still moving and approaching the wye. The two parts of the train gradually separate as they continue to move forward. The engine and tender are shunted into the wye. An alert switchman immediately returns the switch to the mainline position before the still moving cars reach the switch point. Then the cars would drift past the wye to the loading platform where the brakemen on the cars would apply the hand brakes.

Elmer has one major caveat, however, about using this technique. The cars must be empty of passengers because of the risks involved in executing such a closely timed and coordinated maneuver. Such a restriction implies that MacDermot would have to provide an unloading platform before the wye. Yet, his drawing shows a platform only after the wye.

An anonymous reader suggests that MacDermot intended to have the 1500 switcher stationed at the far end of the track. The train would be stopped before the wye; the engine and tender would be uncoupled and moved into the wye.

Then, the switcher would pull the train into the platform area. The engine and tender would complete their "turn-around" on the wye, back out onto the mainline, and connect to the near end of the passenger cars. Thus the locomotive would be ready to pull the passenger cars out of the platform once they have been reloaded. One potential problem with that solution is to prevent the passengers in the open Overfair cars from disembarking when the train stops forward of the wye to let the engine and tender be uncoupled. Those experienced with "crowd control" know that many passengers try to get up and move off whenever a train or an airplane halts short of its final stopping place.

Well, as stated earlier, that part of his proposed route was not approved by the Exposition. In the final version of the layout, there were three stations; one each at the eastern and the western end-of-line, and a middle station on a spur line at the east side of the Athletic/Drill Field. All three terminals consisted of a 200 ft. long platform between a mainline track and a passing track with a small turntable at the very end of the line. The station platforms could accommodate 9 passenger cars of 20 feet length. (The longest train in our photo collection has 8

OOPS! Last month we credited Jim Matheny with donating the Panama Pacific International Exposition book to the Society when in fact the benefactor was Bruce Sherman. Sorry Bruce.



Anyone we know?



I must convey my apologies for the long absence of this column. Life has been intruding too much on my railroad avocation! As a means of catching up, and for the benefit of our new members, I want to chronicle some of the work accomplished during the last “off season”, as well as the history that precedes it.

This month’s topic is the Motorcar #00, the “Double-naught”. This vehicle has its roots in my first large-scale RR project, the wood-frame motor car built for the Wildcat RR in Los Gatos in 1970. As with many creations of youth, I learned most from the failures or insufficiencies of this car. It was light-weight, one-axle drive, and manual brakes only (having no air supply). It could probably be best described as an “over-achiever”, and is still performing well to the best of my knowledge.

I got my second chance at motorcar design while working with Bob Maxfield and Rick Mugele on the Calistoga Steam Railroad from 1976 to ‘79. This is the RR that Al Smith purchased in the summer of ‘79, where the 1913 operated, where the turntable was built, and where the plans for our roundhouse were drawn up. Bob wanted a Maintenance-of-Way powered car for trackwork and switching so that the steamer wouldn’t have to be fired up (with the requisite 3-hour delay), and/or be taken out of revenue service in order to work on the RR. Calling on my previous experience, the design was based on an Overfair passenger car truck modified to accept a chain driven, centrally mounted jackshaft to drive both axles, and four brake beams for air-powered clasp brakes. The truck frame is solid steel instead of composite construction (Erich Thomsen provided this modification for the CSRR trucks his shop built for Bob’s cars), and the truck alone weighs in excess of 700 lbs.

The car frame is composed of stock Overfair passenger car components, providing solid, heavy support for coupler pockets, plus the possibility of someday converting to a 2-truck design with a longer frame. All power components were mounted on a 4-inch channel-steel “deck” which could be separated from the car frame if a longer frame was desired. Power was supplied by a twin-cylinder, air-cooled engine, via roller chain and sprockets to two counter-rotating shafts which provided forward and reverse. This addressed the problem of gearbox-only drive trains: that speed in reverse is limited to a crawl. Selectively tightening v-belts on the forward or reverse shafts also accomplished clutching. An air compressor was fitted, providing air for brakes and air tools.

The project was about half-way along when Al bought the Calistoga operation from Bob Maxfield, and he contracted with me to finish the job to facilitate removing track from the “Mountain Division”, which was only accessible from the RR right-of-way.

The unit performed even above expectations, powering air tools to un-bolt rails and handling heavy carloads of rail and ties up and down the 3% grades. On arrival in Swanton, it was put to work building the Swanton Pacific. After it had been in service about two years, some of the v-belts had stretched out enough to begin slipping under heavy loads, and the primary chain drive had always raised a deafening racket. Al opted to accept Bud McCrary’s proposal of a re-design employing a hydro-static drive. This compact, direct-drive hydraulic power-transmission unit provides forward and reverse, as well as an almost infinite range of “gearing”. The high-speed chain from the motor was thus eliminated along with the slipping belts, but also gone was the ability to coast-- thus requiring us to high-rev the engine whether going up-grade or down. It was about this time the motorcar was given a number, “00”, and its moniker “Double-naught”. She served well for years, building, re-building, and maintaining the RR until the Cal-Poly era.

#### Answers to Tool Quiz

Blue = Roundhouse    Green = Machine Shop  
 Yellow = Car Barn    Red = Track Crew

The first major running-gear maintenance was done around 1994-95 by Geoff Tobin, Andrew Martin, and Ed Carnegie. Ed had come up with a design for a roller-bearing application to fit inside the Overfair journal boxes, and this had been successfully used on the cars built at 'Poly. The 00 was found to have a loose wheel and excessive lateral motion, so it was decided to do a bearing conversion at this time.

Ed poured the journal boxes with aluminum, and Geoff turned the axles and bushed the loose wheel at 'Poly, with Andrew's assistance during assembly & disassembly. All this worked out extremely well.

For the past couple of years we all knew the hydrostatic drive needed work, as it soaked up as much horsepower as it delivered to the final drive. Scheduling work was a major hurdle to overcome, as we were also working on the diesel #502 and needed at least one or the other to keep track work going. Last fall it got so bad it had trouble moving one work car up to the barn, whereas it originally had been able to push 3 passenger cars up the grade. The hydro unit was re-built, but with little success. A factory rebuilt-as-new replacement was tried with only marginal improvement. Bill Engelman, Marty Campbell, and Ed Carnegie all put in time on this, and by now it was getting pretty frustrating because of the amount of time it takes to disassemble and reassemble the components in a very restricted space. Bill pretty much adopted the project at this point, moving the whole contraption, first to Central Hydraulics in Redwood City, and then to his own shop.

Final remedies were:

- another rebuild of the hydro unit to replace heat-damaged seals,
- replacement (custom-mounted) main cooling fan and protective cage to cool the hydro directly,
- increased size hydraulic fittings to relieve hydraulic fluid restrictions,
- re-sized new hoses for same purpose,
- higher viscosity fluid,
- new fan-cooled oil cooler with thermostat located on hydro unit case with manual override switch,
- nearly complete re-wiring,
- permanently mounted and wired 2-way RR radio,
- new instruments including hour meter, voltmeter,

fluid temp gauge, fluid operating pressure gauge,

- Andy fitted an electronic speedometer,
- And finally, Ed had the operator's seat re-upholstered.

Projects for the future will include new air brake control valves when they become available. For all the hard work--MANY THANKS!!



Inbound

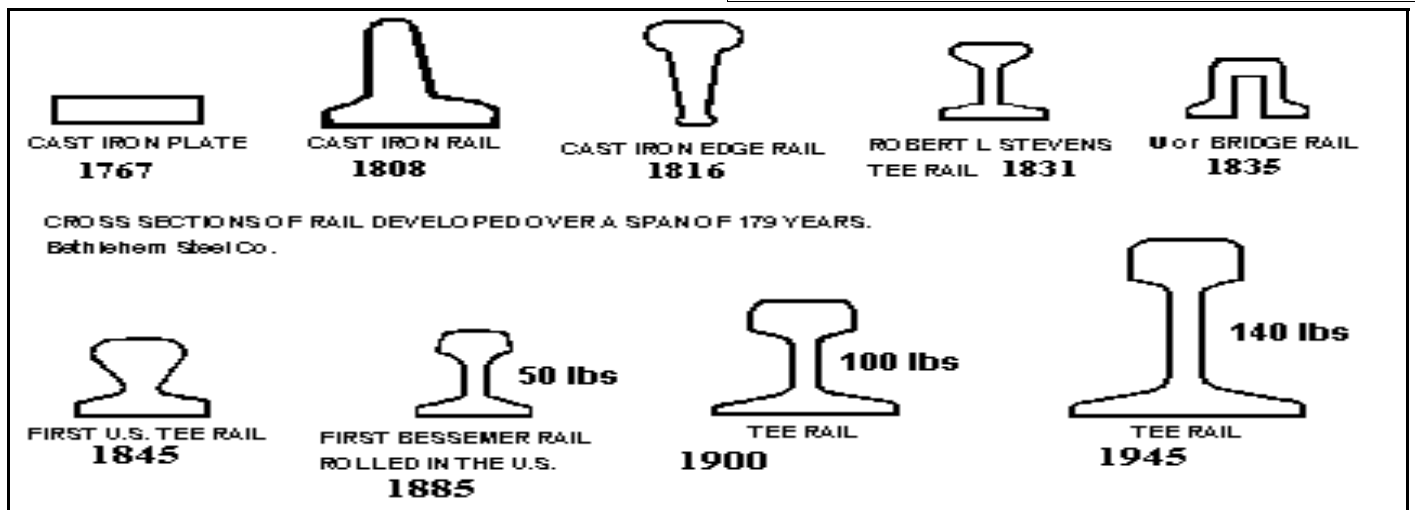
Photo by Pete McFall

# HELP WANTED

Dancing with the Gandy's is not all that keeps a railway on track. The following lists some of the maintenance chores, (do-dad's or honey-do's), that need to have a member take on as *their* project and a person to contact.

<b>Engine and Rolling Stock</b> Contact Randy Jones
Replace rear tender end-beam on 1912.
Install leaf springs on 1914 tender truck.
Replace tender truck bolster on 1914.
Complete removal of brackets on 1913 boiler.
Remove firepan from 1913 boiler.
Pack 1913 drivers for shipment to Cal-Poly.
Clean 1913 driving boxes.
Clean (remove rust) 1914's rods.
De-rust & rebuild keystone cars.
Wire cars for electric operated brakes.
Design 12V. PA system for cars.
Machine new internals for cylinder cocks.
Machine new throttle rods.
Machine replacement piston rod remover/driver tool.
Design & fabricate driver rollers for valve timing.
Construct inspection/running maintenance trough/pit.
Re-machine 502's handbrake cable reel for chain and

<b>Facilities and Grounds</b> Contact Ed Carnegie
Clean & paint caboose.
Replace air line between machine shop and round
Add under ground Telephone and network line to
Remove old concrete around round house & replace.
Pave lead area to round house.
Pave the lead area in front of the machine shop
Install a grade crossing for access behind the round
Build a crossing to allow access to the round house
Install three flood lights aimed at the turntable from
Re-seal joint between car shed roof and car shop
De-rust & touch-up turntable.
Construct "garden tracks".
Gravity feed incidental fuel (gas) storage tank.
Develop camping sites.



**Roundhouse/Machine Shop**

Contact Geoff Tobin

- Sheet rock, prime and paint the interior.
- Install electrical on walls.
- Install reeled drop lines for electrical, water, and air
- Paint or surface treat concrete floor.
- Build storage cabinets and shelving units for the area
- Build a free standing work bench for the area south of bay number 1. This work bench should be on
- Reconfigure machine shop building to be used as a warehouse, until we have time to rebuild.
- Complete research on infra-red heat for round house,
- Complete installation of lighting in round house.
- Remove existing sheathing and repair rotted and damaged wood.

**Computer Stuff**

Contact Fred Vertel, FitzPatrick, Ed Carnegie, MaryAnn Carnegie, or Lou Haughney

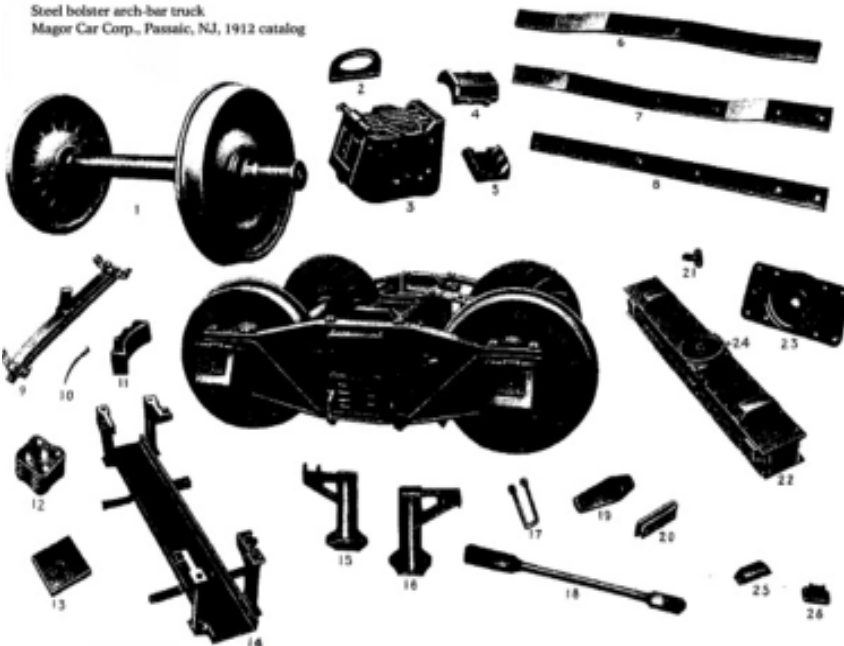
- Develop database of members with internet access for the Director, Membership Committee Chair, and
- Develop database of historical archives.
- Copy historical photos to digital images.
- Create on-line calendar of events.

**Car Barn**

Contact FitzPatrick or Andy McLean

- Build wood or steel car "horses."
- Build welding table.
- Move 25hp compressor & blast cabinet to machine
- Refurbish Keystone cars.
- Locate & anchor shelving in car shop.

Steel bolster arch-bar truck.  
Magor Car Corp., Passaic, NJ, 1912 catalog



Steel bolster arch-bar truck  
Magor Car Corporation, Passaic, NJ  
1912 catalog

- |                                   |                   |                               |
|-----------------------------------|-------------------|-------------------------------|
| 1 Pair of wheels mounted on axle. | 5 Journal wedge   | 9 Brake beam                  |
| 2 Journal-box dust guard          | 6 Top arch bar    | 10 Brake shoe key (pin)       |
| 3 Journal-box with lid.           | 7 Bottom arch bar | 11 Brake shoe                 |
| 4 Journal bearing                 | 8 Tie bar         | 12 Truck spring nest          |
|                                   |                   | 13 Truck spring block         |
|                                   |                   | 14 Spring plank               |
|                                   |                   | 15 Left hand truck column     |
|                                   |                   | 16 Right hand truck column    |
|                                   |                   | 17 Brake hanger               |
|                                   |                   | 18 Brake bottom rod           |
|                                   |                   | 19 Brake lever (live or dead) |
|                                   |                   | 20 Dead lever fulcrum         |
|                                   |                   | 21 Dead lever fulcrum bracket |
|                                   |                   | 22 Truck bolster, complete    |
|                                   |                   | 23 Body center plate          |
|                                   |                   | 24 Truck center plate         |