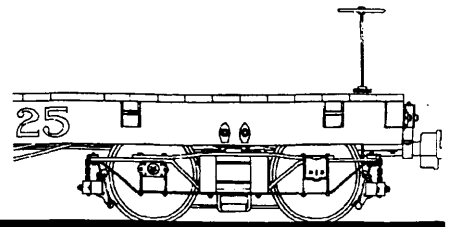


CARTER NARROW GAUGE CHRONICLES



The Newsletter of the SPCRR

June 1998

CARTER BROS.

Manufacturers of

Passenger and Baggage Cars

City, Freight and Hand Cars,
Logging Trucks, Lumber Cars, Turn-
tables, Water Tanks, Etc.

Office, 10 California St., S.F.

Works, Newark, Alameda Co.

Special attention given to Narrow
Gauge Work.

The Directors and Managers
of the SPCRR for 1998

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Newsletter Editor: Howie Zatt

June General Meeting

June 19th in the Granary at
Ardenwood
7:00 p.m.

Featuring a program on
“The Alaska Railroad”
by Don Marenzi

Take a trip through the history of
one of America’s most interesting
railroads. Included will be
information on the Railroad’s *narrow
gauge* origins, government
involvement, and photos of the
unique equipment used, followed by
photos Don has taken along this
scenic line.

Notes From Around the Museum

From the Curator's Work Bench -

The restoration efforts of the past few months have continued to concentrate on our San Joaquin & Sierra Nevada combine, commonly known as SP 1010. The restoration continues to pose a variety of challenges and unique opportunities as we attempt to conserve as much of the original car as possible, instead of simply rebuilding the car with new wood and metal. The ultimate goal of this restoration is the rebirth of a turn-of-the-century narrow gauge car and a bit of the way of life that went along with it. The more pressing goal is the completing of the restoration before Railfair in Sacramento, June 1999.



photo by Andy Cary

The “unique” weather that we have all suffered through this past winter has resulted in some on-the-fly regrouping on several of the workdays. We have managed to hold all workdays on their scheduled days, but often found ourselves working inside the car rather than on the exterior as originally planned. The positive in this is that a great deal of work has been done to the passenger compartment of the car. Jarrod and Dan Della Chiesa have spent hours sanding the walls in preparation for the various shades of stain they (the walls, not Dan and Jarrod!) are soon to receive. Rolland Howard has done some beautiful work on the windows (as well as hours of heat gun work under the bonnets on each end when it wasn't raining too hard). The various bits and pieces of the ceiling are mostly back in place (thanks Randy). Finally, we have started to venture into the baggage compartment and its badly flaking paint. John Stutz has spent large portions of the last two workdays removing the paint from the baggage end door.

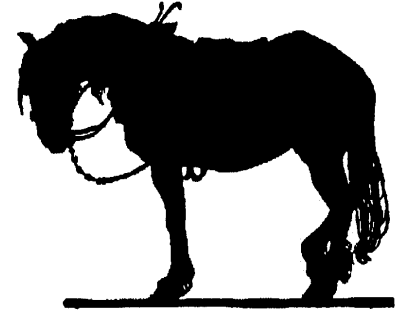
When the weather finally did clear up, we were able to once again concentrate our efforts on the outside of the car. We have patched the infamous V&T leak in the roof once-and-for-all (fingers crossed!). One side of the car has received several iterations of painting and sanding with help from almost everyone, particularly Bob Tupper. While this sometimes seems pointless—the primer is white, the paint green so sanding the paint smooth, and therefore exposing the underlying primer, often makes the car look quite bad—the finish is starting to look very nice. Advice from Kevin Bunker has been very helpful in achieving a nice finish. We have now started to focus on the other, long neglected side of the car. With the procedures learned on the side that is now green, progress on the second side promises to be significantly accelerated. The siding is in much better shape and just received its first coat of primer (courtesy of Mal Evett) in ages. A little sanding, filling, sanding, painting, sanding, painting, sanding, painting...and it'll look great!

Meanwhile, work has not been confined to the wood bits. Bruce MacGregor has made a few visits from Oregon and has taken on the challenge of having the end rails and couplers fabricated. This involves preparing some new drawings and coordinating the work with our blacksmith. We're looking forward to the installation later this summer which will (finally) enable us to move the car without any of the various Rube Goldberg attachments we have used in the past.

We continue to hold workdays on the third Saturday of each month. Tuesday evening workdays are also now in full swing. We have an e-mail list and a regular mail list for notification of upcoming dates—if you are interested in receiving a reminder notice before each workday, please let me know at (408) 370-3555 or rhill@opticworks.com.

The Horse Report

Both of our horses, Jiggs and Tucker, have weathered their (wet) winter vacation well, and are now returning to work. Tucker is wearing a special rubber pad on one of his rear feet, between his hoof and the shoe, as a result of a foot bruise (we blame it on El Niño.) While he could pull the train in an emergency, we plan on letting him take it easy a little while longer. In the mean time Jiggs is happily pulling the train, waiting for either Tucker or the Plymouth locomotive to get well and help out.



Also, does anyone want a kitten? One of the park cats had a litter in our feed barn. We plan on keeping one of the kittens as a "mouser" but have several more available. We are working on plans to capture the mother to have her spayed, before she adds any additional park residents.

If you are interested in a kitten, or in volunteering on the train, call Mary Jane at (510) 796-9164.

A Carter Brothers Trivia Question ...

In our last issue we ask the question, *One of the cars in our collection was in an Elvis Presley movie. Which car and which movie?* If you missed the general meeting, the answer was (drum roll...) Nevada Central boxcar 253, originally built for the Monterey and Salinas Railroad in 1874. It appeared in Viva Las Vegas. In the movie the car can be seen in the background of one scene...at the time it was part of a display of historic railroad junk outside a casino.

The Store

The store is proud to announce they now have Beenie Pets. Additionally the store needs volunteers, call Pat at (510) 796-8615...

The Park Contract

At our last general meeting we were discussing our contract with East Bay Regional Park District, and the long-term effects on our organization's future. While at this writing we still don't have a contract signed, we have a contract which is signable. The only details left involve repairing pasture fences and similar minor issues. The board believes that it has identified a scenario which will result in a long-term contract, and thereby allow us to invest in the first car shop building, and finally get our collection under cover.

Dues

In our last issue we reminder everyone that membership dues are now due, but we forgot to provide details such as how much and where to send the money. Whoops! So this time we have included a membership form.

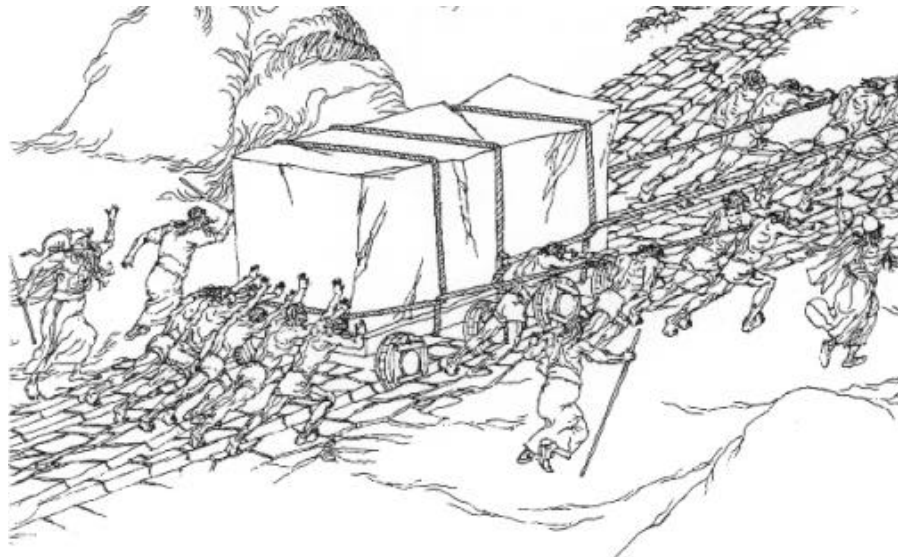
SPCRR MEMBERSHIP	
<input type="checkbox"/> Contributing Member (\$20)	<input type="checkbox"/> I would like more information.
<input type="checkbox"/> Life Member (\$250)	<input type="checkbox"/> I would like to volunteer
<input type="checkbox"/> Donation (\$ _____)	
Name (please print): _____	
Address: _____	
City/State/Zip _____	Phone: (____) _____
Mail to: SPCRR, P.O. BOX 783, NEWARK, CA 94560	
New Members receive the Newsletter and can petition to become voting members after volunteering for one year	

Cruel and Unusual Motive Power (Part 2)

Park visitors are frequently surprised by our use of horses to pull trains, and somewhat concerned for their well-being. While concern for the health and safety of horses may be historically justified, the mere fact of their use was so common that it should not be cause for comment. We now inaugurate a series of the odd, the strange, the historically interesting, and the out-and-out bizarre solutions to motive power needs [and we are *not* making these up].

Power from the People!

In The Lore of the Train, or C. Hamilton Ellis traces back what he calls "the railroad idea" to 6th century Asia and tramways used to move large stones for building temples. As you can see from figure #1, the motive power was a lot of people, pushing and tugging. People continued to be the primary source of motive power for centuries, and as we shall survey in this installment, this basic source of power was used well into modern times.



auth

fig. 1

The more common forms of people-powered railways are ones we should all be familiar with, since we use some of them ourselves—the various forms of hand cars detailed on this page from the 1879 Railroad Car Builders Pictorial Dictionary [figure #2].

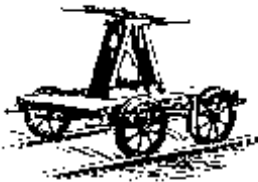
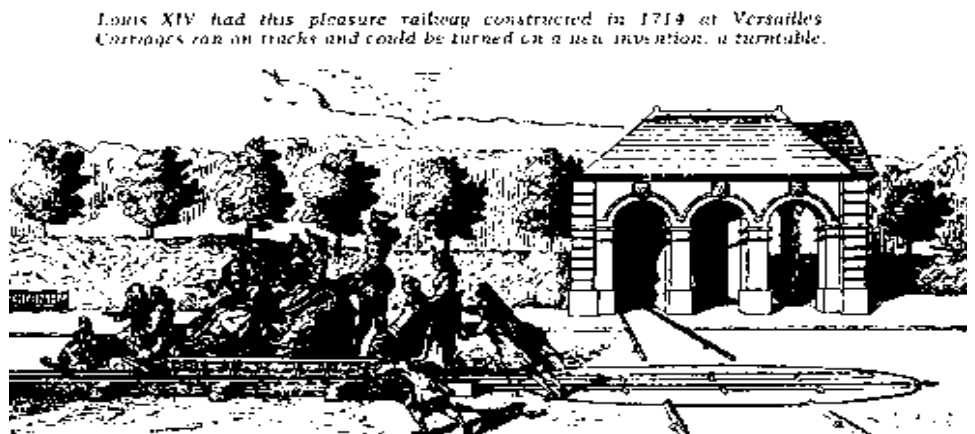


Fig. 24
LEVER HAND-CAR

fig. 2

One early oddity of note is seen in figure #3, described as "a pleasure railway" in Railroads in the Days of Steam. It was built in 1714 at Versailles by Louis the XIV, and featured a new invention—a "turntable." It also featured, as you can see, be-wigged servant power.



Louis XIV had this pleasure railway constructed in 1714 at Versailles. Carriages ran on tracks and could be turned on a new invention, a turntable.

fig. 3

But this series owes its title and inspiration to Robert Hughes' description of the first railway in Australia, built in the 1840s:

"It was a true curiosity, a small landmark in the history of transportation... It connected the dock at the head of Norfolk Bay, by Eaglehawk Neck, to the main settlement at Port Arthur some 4.5 miles away. On it, supplies and people could be taken to the coal mines and the Neck without a long detour by sea around the peninsula. It was laid along a switchback route through the dense gum [eucalyptus] and



fig. 4

fern forest, sawn hardwood rails about 6 inches by 3 inches were nailed to rough sleepers bedded in clay. Wooden bridges carried the line across the gullies. It had no engine, the power was supplied by convicts, propelling it at a trot, pushing against crossbars at front and rear [figure #4]. Its carriages were four-passenger carts, running on cast-iron mine-truck wheels... The trucks [cars]... could rattle downhill at 30 MPH, a terrifying velocity at a time when people seldom went faster than a trotting horse."

Hughes also quotes an 1851 visitor to Port Arthur, Colonel Godfrey Mundy:

"...down they rattled at tremendous speed...the chains around their ankles chinking and clanking as they trotted along...[T]he runners jumped upon the side of the trucks in rather unpleasant proximity with the passengers, and away we all went, bondsmen and freemen, jolting and swaying... a man sitting behind contrived, more or less to lock a wheel with a wooden crowbar when the descent became so rapid as to call for remonstrance."

There was another convict railway operated on the Tasman Peninsula about the same time, and although not common, convict-power was tried in the United States during the great Epizootic (a type of horse flu) of 1872, which claimed almost a quarter of the horse and mule population of the United States and brought the country to a standstill for three months. The experiment with human power was reportedly less than successful [figure 5].



fig. 5

And finally, to touch lightly on the modern era, in 1978 Charles S. Small documented some shortlines on Taiwan—several of which were even at that date people-powered, and one at least—The Yu Na coal mine operation—had [are you ready for this?] a Helper District! The six mile long line had passing sidings, a passenger station, and even a 600 meter long tunnel.



fig. 6 – The helper (female) and the regular locomotives have been waiting for a northbound empty to clear the tunnel. Now that it has emerged they have a hard job starting the train for its tunnel transit. The helper only goes as far as the tunnel portal.

(Editor’s Note: Nate, Speechless!!!!)

Sources:

Ellis, C. Hamilton,. The Lore of the Train, Crescent, 1973
 Forney, Matthias N., The Railroad Car Builder's Pictorial Dictionary [1879], Dover reprint, 1974; McCready, Albert L., Railroads in the Days of Steam, American Heritage, 1960
 Hughes, Robert, The Fatal Shore, Alfred A Knopf, 1987
 Rawsome, Frank, Trolley Car Treasury, McGraw Hill, 1956
 Schelerth, Thomas J., Victorian America: Transformations in Everyday Life, HarperCollins, 1991
 Small, Charles S., Rails to the Mines: Taiwan's Forgotten Railways, Railroad Monographs, 1978.

Next: New York's First Subway--It Sucked!

Figures 6 through 9, with Mr. Small's original captions, leave me unusually speechless--until the next issue, at least.



fig. 7 – The earth between the ties has been pounded down by the pressure of the pusher’s feet.



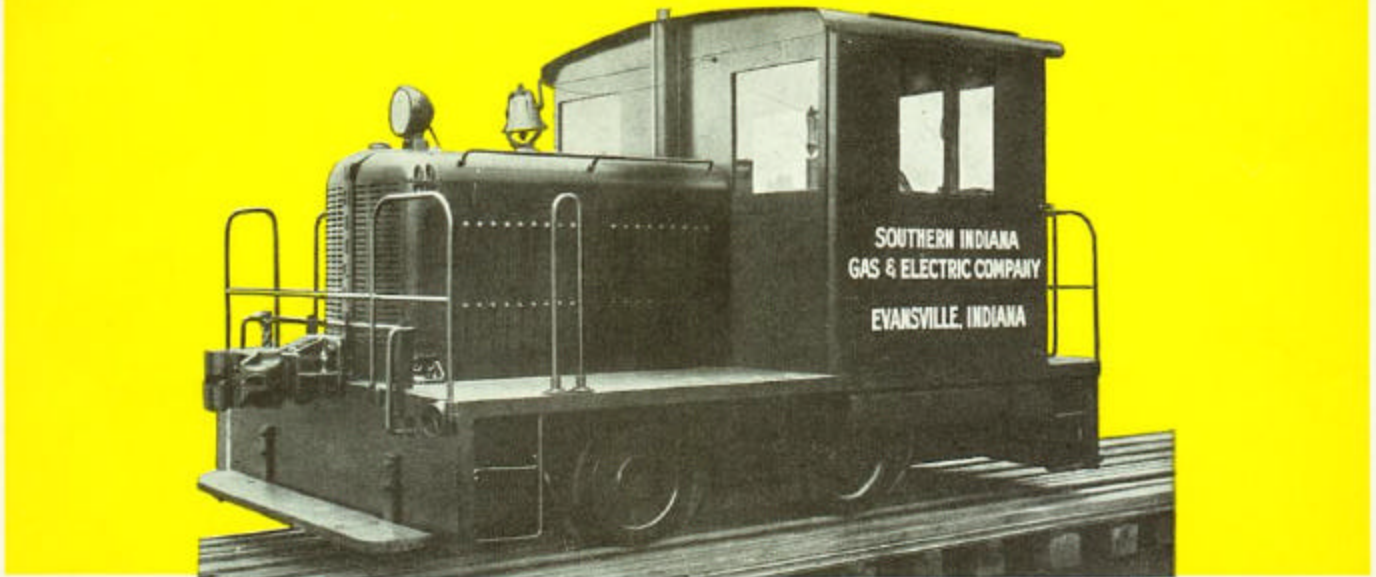
fig. 8 – The helper station. All coal trains pick-up a helper here for the steep grade to the north portal



fig 9 – The helpers drift downgrade.

WHITCOMB 12-TON LOCOMOTIVE

DIESEL MECHANICAL 0-4-0 TYPE—GAUGES—23⁵/₈" AND UP



Engine—Hercules DRXB. Cylinders 6—Bore 4³/₈"—Stroke 5¹/₄". Nominal rating 113 HP at 1800 RPM.
Clutch—Double disc dry type with four 13" facings.
Transmission—Heavy-duty, five speeds forward and reverse—semi-constant mesh—reverse transmission, sliding gear type.
Starting Motor—Electric 24 V automotive type.
Charging Generator—12 V automotive type driven off engine, furnishes auxiliary power throughout engines

entire speed range.
Chain Drive—Chains are alloy steel, heavy-duty roller type.
Fuel Tank—40 gals. capacity, equipped with capacity gauge and fuel strainer.
Radiator—One piece core type, with sufficient capacity for adequate cooling.
Brakes—Hand operated, fully equalized to all wheels— one piece flanged cast iron shoes operating on each of the four wheels.

FRAME AND RUNNING GEAR

Side Frames and Bumpers—torch cut from rolled steel slabs, welded. **Journal Bearings**—Timken heavy-duty roller type. **Steel Springs**—semi-elliptical—spring suspension has cross equalization (3 point suspension). **Wheels**—rolled steel 24" diameter with standard AAR tread and flange on standard gauge, industrial type on narrow gauge. **Axles**—carbon steel 5¹/₈" diameter heat treated and machined. **Couplers**—full size AAR—6" x 6" short shank on standard gauge and automatic or link and pin on narrow gauge.

SUPERSTRUCTURE

Cab—fully enclosed of fabricated steel shapes and plates welded and bolted to the frame. Cab floor has safety tread steel plate, windows have steel sashes and plate glass glazing. **Engine Hood**—heavy steel construction bolted in place—doors have vertical hinges providing easy access to equipment from both sides.

SPEEDS AND TRACTIVE EFFORTS

Hercules Engine DRXB, 6 cylinders, 113 HP at 1800 RPM

Speed	Gear Ratio	MPH	TE Lbs.
First	60.70:1	2.11	6000
Second	35.20:1	3.65	6000
Third	19.70:1	6.52	4550
Fourth	10.40:1	12.85	2310
Fifth	7.52:1	17.10	1730

Above TE based on clean dry rail 25% adhesion. Maximum TE with sanded dry rail 33¹/₃% adhesion is 8,000 lbs. in low gear.

Caterpillar Engine, D-318, 6 cylinders, 104 HP at 1800 RPM

Speed	Gear Ratio	MPH	TE Lbs.
First	60.70:1	2.11	6000
Second	35.20:1	3.65	6000
Third	19.70:1	6.52	4180
Fourth	10.40:1	12.85	2120
Fifth	7.52:1	17.10	1600

Above TE based on clean dry rail 25% adhesion. Maximum TE with sanded dry rail 33¹/₃% adhesion is 8000 lbs.

ACCESSORIES—WEIGHT AND DIMENSIONS

Brass bell and electric horn—four hand operated sanders—two headlights—cab, panel and trouble lights—upholstered swivel seat and arm rest—steel tool box with tools—padlock and grease gun.

Weight on drivers 24,000 lbs.—**Wheel base** 4' 7"—**Length (over bumpers)** 13' 11"—**Width overall (standard)** 9' 7"—**Width overall (narrow)** 7' 7"—**Height overall** 9' 4".

This locomotive is also available in the 14-ton size. Gauges 23⁵/₈" and up, with 7,000 lbs. TE in first and second speeds. Maximum TE with dry sanded rail (33 1/3% adhesion) 9,330 lbs. in low gear.

MINIMUM RADIUS OF CURVE 30'—**MATERIALS IN ACCORDANCE WITH A.S.T.M. SPECIFICATIONS**

The Locomotive Report

If you have been to the farm recently you may have noticed that *Rusty Mary*, our 1923 Plymouth DL 2 locomotive, is in pieces (lots of pieces). Last year as we worked with the locomotive it became obvious that something was wrong. The locomotive was pulling less and less. After several attempts to adjust the clutch (with mixed results) we finally we had to admit that the clutch was worn out. John Theberge finally attacked the problem. We understood from the literature that we have on the locomotive that the clutch was easily replaced, but as far as we can tell either no one remembers how, or life in the 1920's was more difficult and as a result it just seemed easy.

To get at the clutch John decided to remove all the body work. This will also give us an opportunity to have the sheet metal sand blasted and repainted. *Rusty Mary* may need a new name when we are done. Before we sent the sheet metal out, we completed a paint survey, and George Korener carefully photographed the locomotive. The survey suggests the locomotive was originally black, later may have been green, and still later orange. We have decided to repaint it in black, with the raised Plymouth lettering on the frame and radiator in red. We have yet to find any lettering information, but will develop something based on "standard" Plymouth practices.

As John works on the locomotive we have learned much about it. It is truly well designed. For the most part we find it easy and logical to work on. Considering its short service (only 6 years from 1923 to 1929) it has been worked on a lot. The transmission has been apart once. The clutch linkage has been broken and welded more than once, but generally the loco is as built.

We would like to extend a special thanks to Dave Wyatt at Fremont Hitch & Weld for welding a piece of the clutch linkage that had broken. This was clearly a nasty and difficult project. Without his efforts the locomotive might not be available until fall. And when the time came to pick-up the piece the charge was... Free! Thanks, Dave.

John has been working on the locomotive most Tuesday nights—and he could use some help—come by and try it.

On other news, we are developing a plan to resurrect our Whitcomb once the plymouth is complete. At the suggestion of mechanics from Cargill Salt we are considering converting the locomotive to a hydraulic drive system. More on that later...

Enjoy the ad for Old Mission Cement, owner of our Plymouth, and the Specification Sheet for our Whitcomb...

**World Record broken by Construction Company of North America
on Hetch Hetchy Tunnel, longest in the World.**



A tunnel 21 1/2 miles long, built through granite, partly through massive steel-lined difficulties, has involved engineering, equipment, material and more material. It was planned and installed the operations, maintenance, construction and buildings. In no other job in history was such a job done.

Old Mission Portland Cement was used throughout the work. Making the tunnel and other other new methods helped to bring about this Engineering and Construction Company of North America (Old Mission Building, San Francisco).

The existing conditions of Hetch Hetchy Tunnel Construction called for a high-strength Portland Cement.

**Old Mission
Portland Cement
"Standard as a Brand"**

It was used in all the concrete work, especially the big walls of Tunnel Tunnels, concrete linings and concrete bridge supports, water projects.

Old Mission Portland Cement is made by the modern Van Nostrand and Company. Specifications by a standard method, in the work and policy to give the Standard Portland Cement Quality without compromise.

Old Mission Portland Cement Company

Standard Oil BuildingPhone: San Jose, Cal.San Francisco, Cal.

Announcements and other nonsense

Voices from the Volcano,

now known as

The Octopus and the Volcano

The Story of California Workers and the
Great Pullman Railroad Strike of 1894

is being presented as part of the
San Francisco LaborFest '98,
Sunday July 19th, at 3:00 p.m.
at the South of Market Cultural Center
934 Brannan, San Francisco (between 8th & 9th)

For information contact Nate at (510) 569-4311
or for reservations call (415) 642-8066

Tickets \$9.00 (children are less)



“The Curse of California”

— From “*The Wasp*”, 1882

A Sunday Walk Through the Canyon

Join us on Sunday, July 12, for a walk through **Niles Canyon** lead by SPCRR President Randy Hees. This will be sponsored jointly by Pacific Locomotive Association and the Society for Industrial Archeology. We will gather at the Sunol Station at 11:00 a.m. and walk the seven miles down to Niles. Along the way we will inspect the bridges and culverts of the canyon line, and look for any evidence of the 1865 railroad line. This will give us a chance to see this nearby historic railroad from a different perspective, and allow us to stop and linger wherever we find interesting artifacts. The walk is moderately strenuous, so wear heavy shoes and bring water and a snack. From Niles we will return by special train. There is no charge for PLA members, but non-PLA members should plan on a \$5.00 donation for the train ride.

For information call Randy Hees at (650) 347-5055.

SPCRR
PO Box 783
Newark CA 94560

First Class

SPCRR Calendar

June

- Friday, June 19, 7:00 p.m., General Meeting at Ardenwood
- Saturday, June 20, Restoration Day
- Saturday, June 27, Fire Engine Day

July

- July 4, Independence Day at the Farm, Special Event Schedule
- Wednesday, July 15, in the evening, George Patterson's Birthday Party
- Saturday, July 18, Restoration Day
- Saturday & Sunday, July 18 & 19, Summer Farm Fair, Special Event Schedule, **"All hands on deck"**
- Sunday, July 19, Octopus & Volcano, in San Francisco

August

- Saturday & Sunday, August 15 & 16, Tentative Special Event, Civil War Encampment
- Saturday, August 21, Restoration Day

September

- Friday, September 18, 7:00 p.m., General Meeting at Ardenwood, (program to be announced)
- Saturday, September 19, Restoration Day
- September 26 & 27, Cajun-Zydeco Festival, Special Event Schedule

October

- October 17 & 18, Harvest Festival and Restoration Weekend
- October 23, 24, 25, 29, & 30, Haunted Train, **"All hands on deck"**

Remember—Tuesday night work calls at the farm, 5:00 p.m. or so until dark (or sometimes later) and (there is always an "and") we need volunteers for Saturday operating crews. Call Randy or Mary Jane.