

November 2007

HIT & MISS

Journal of the Western Antique Power Associates



SIERRA MADRE PIONEER DAYS at E. Waldo Ward & Son

A contingent from the Western Antique Power Associates showed their antique engines and equipment at the Sierra Madre Pioneer Days on October 20. It was nice to be invited back after missing last year.

Our display area was at E. Waldo Ward's in a beautiful neighborhood in the foothills of the San Gabriels. The Ward family manufactures jams, jellies and other food products. They have resided in Sierra Madre since Edwin Waldo Ward purchased ten acres in 1891. The house and barn are the originals that were built in 1902.

Ward's goal was to make English-style marmalade. He imported two special orange trees from Spain and grafted them to

eventually have a grove of over six hundred trees.

At the show, Jeff, great-grandson of E. Waldo, conducted tours of the manufacturing facilities.

For WAPA, Ken Evans was the leader of the show. Chairman is a hard job and his effort is appreciated.

Ken and Larry showed their International Harvester engine powering their magical mystery pump. The engine is particularly interesting because it was brought from Chicago and eventually worked on a ranch where Longo Toyota resides today.

Wayne Mabb showed his John Deere Model D. Jim Davis brought a Fuller & Johnson pumping engine and a New Holland model powering an L.S.

Starrett food chopper. Joe Giocomarra brought a John Deere engine and a Maytag twin. Gene Cervený brought a vertical Baker Monitor powering an air compressor. Rob Skinner and Kelley Garcia brought a Richard Hornsby oil engine.



President's Message

Tom Millett tmillett@yahoo.com

It always seems that when I'm meeting a deadline for my message of the month, our shows for that month are just days away and will have come and gone by the time this hits your mailbox. As I write this, we are only days away from three great shows and all on the same day. I'm sure there are those who rightly ask why we would schedule three in one day. Well, we have no control over the dates events are held, and these three are important in terms of our standing with the organizations that sponsor them. Actually we had to reluctantly pass on one show for that day. We only have two more shows for the year; the Los Alamitos Wings, Rotors & Autos, and the Lake Forest Victorian Xmas shows. We also passed on the Chaffey - Garcia show this year. Larry Madole is hosting another Swap Meet, possibly in December. Watch for the announcement. Bring money because I'm clearing my garage of some stuff that you can't do without.

Well folks, we finally did it !!! We have a new president coming up January 1st. You say, "Not so fast Millett, we haven't had an election yet". Surprise!!! We don't need an election because there is only one nominee for each board position. At the November meeting, the secretary will cast one ballot to elect the slate of nominees. That's a new revision in our by-laws. So, congratulations go to President-Elect Wayne Mabb. Also, new on the Board is Librarian-Elect Craig Maxwell. All other positions remain the same. At the first meeting in January the Board will

appoint a secretary to replace Wayne.

Thank you Jim Davis for serving us as Librarian this past year. We don't have a real appreciation as to how brutal your trips to the meetings had to have been. Now, how about being secretary for the year? Anyway, all organizations need change. It certainly was time for ours. New ideas bring a whole new spirit and excitement.

That's it for this time. Play safe.

From the Editor's Desk

Rob Skinner editor@wapa.us

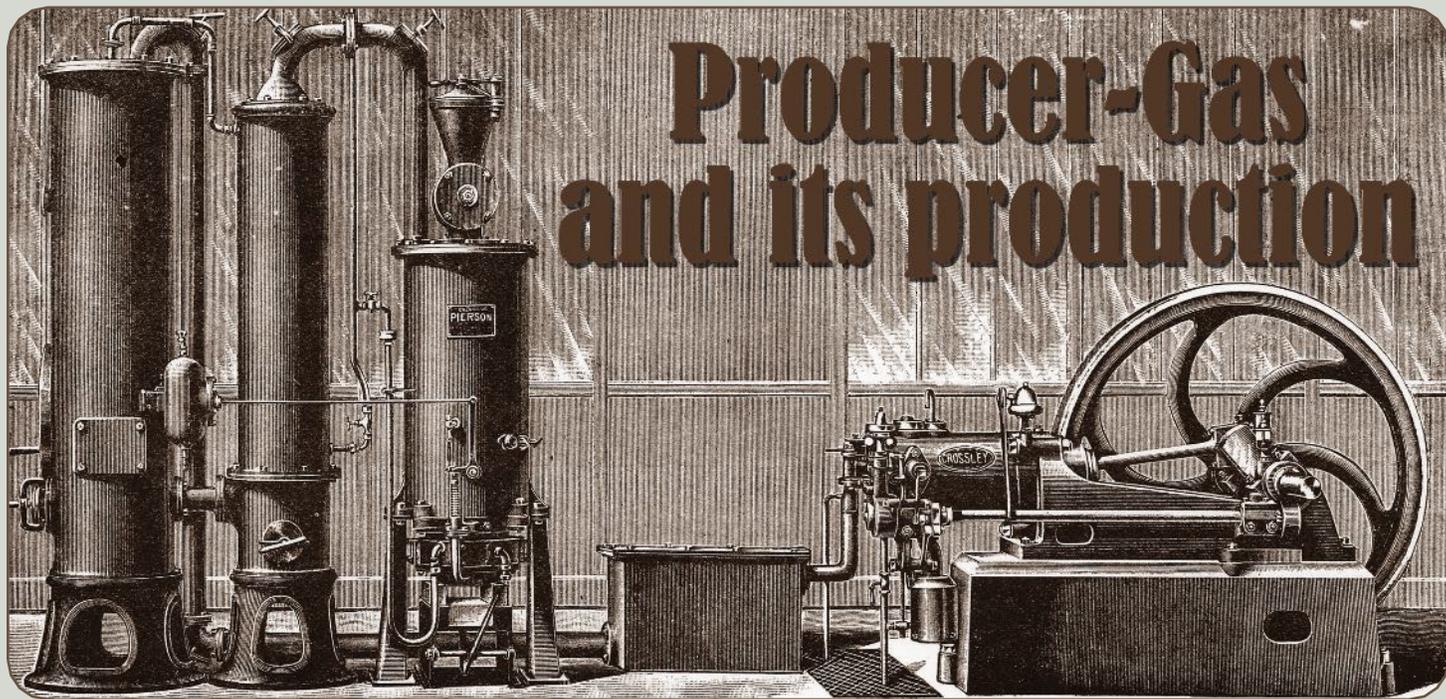
This month's edition of the Hit & Miss turned out to be more fun that I originally anticipated. Our printer has been making suggestions on how to improve the graphics, and it turns out that the implementation of those suggestions wasn't as bad as I thought. It's like a difficult engine restoration -- it's a lot easier once you make up your mind to just to it. The feature article on gas-producers was also a surprise. At first glance, it appeared that the references would be sparse. But once I cracked open the books, I found there is a LOT written on gas production.

In the future, I intend to have old issues of the Hit & Miss available at our shows for distribution to interested spectators. Every month we have a few extra copies and we can use these to build interest in our hobby and our club. If you have someone who expresses an interest, get a copy from me.

Last month we had no response regarding Gus and Mike's contraptions. Their use will remain a mystery.

More Sierra Madre Pictures





Article by Rob Skinner

J & G Pierson producer-gas plant fueling a Crossley engine

Producer-Gas and its production

As modern stationary engineers, we take a lot of things for granted that posed great difficulty for our ancestors. For instance, on the morning of a show we pull in to the corner Chevron station, fill up with gasoline, Diesel, or propane, and we're off for a day of fun in the sun. In the old days, there wasn't a Chevron station within two minutes of everyone's house. There were no tanker trucks to fill storage tanks and there were no underground pipelines bringing natural gas to every factory across the country.

Early engines ran on a variety of fuels, depending on the ideas of the engine builder, regional availability, and governmental regulations. For the purpose of this article, we are concerned with engines that run on gas -- not gasoline, but gaseous fuel. We Americans are a bit sloppy in interchanging the the two terms, which leads

to ambiguity and confusion. From here on out, we're talking about the gaseous kind of gas.

A common fuel that was used for various industrial purposes, including engines, was producer-gas. Producer-gas results from the gasification of solid fuel where the heat required for the process is obtained by partial combustion of the fuel itself. The solid fuel was typically coal, but oil and wood were also used.

By limiting the amount of air admitted to the fire, carbon monoxide (a combustible gas) is formed, rather than the carbon dioxide formed by complete combustion.

Further, steam injected onto the incandescent coal degrades into hydrogen and carbon monoxide (both are combustible).

After the gas leaves the generator vessel, it enters the vaporizer, where it turns a small

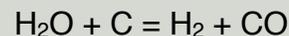
amount of water into steam. From there, the gas enters the scrubber, and eventually into a storage vessel.

Chemistry 101

When the carbon in the coal is completely burned in oxygen, it forms carbon dioxide, CO₂. This gas, CO₂, if passed through incandescent carbon, is converted to carbon monoxide, CO. The chemical reaction is generally given:



A producer using the above process is very inefficient because it wastes considerable heat. Manufacturers of gas plants made use of this wasted heat by using it to turn water to steam, which was subsequently passed over the incandescent carbon, producing both hydrogen and carbon monoxide. That reaction is as follows:



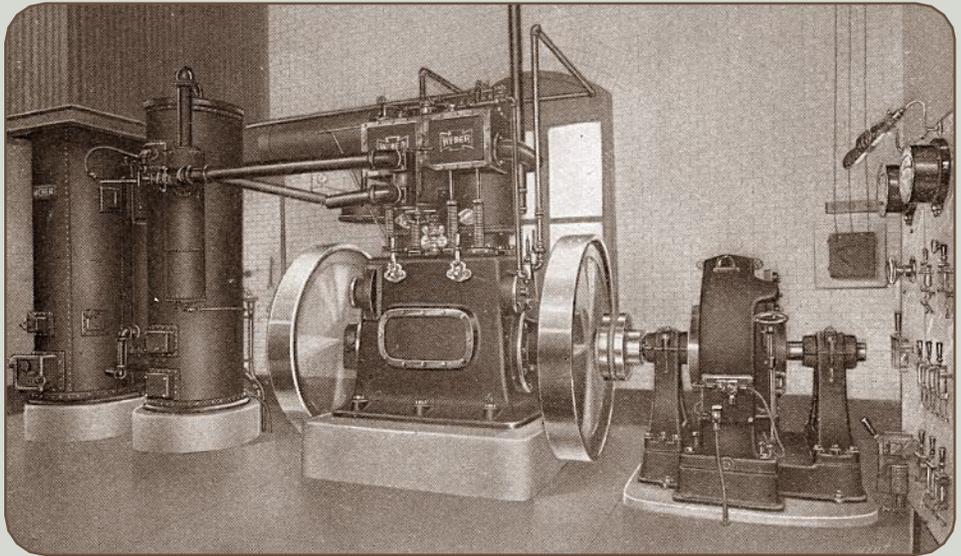
Producer gas made with a good grade of anthracite coal would have a heat value of about 140 BTU's per cubic foot. A typical composition of such fuel is as follows:

- Carbon Dioxide CO₂.....6%
- Carbon Monoxide CO...24%
- Hydrogen H₂.....15%
- Nitrogen N₂.....55%

Using Producer Gas

Producer gas, besides being used to power engines, was used for steam boilers, kilns, forges, glass furnaces, roasting ovens and sometimes lighting.

Prior to the producer gas plant, heat from the regular combustion of coal was cheaper than the heat from coal gas. Simple economics, therefore, put the gas engine at a disadvantage when compared



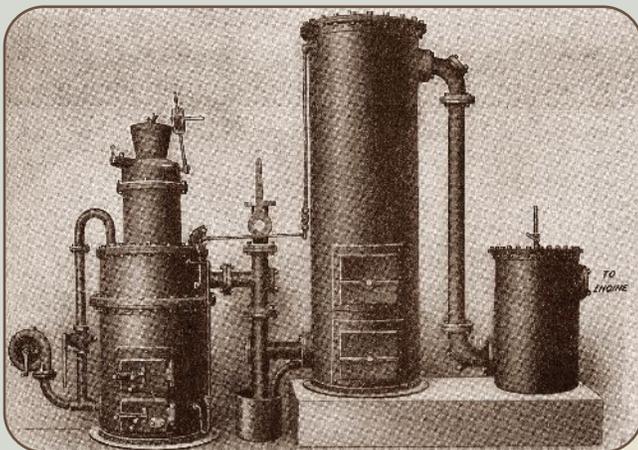
Weber offered a complete producer-gas, electric light and power plant.

to the steam engine. However, the producer gas plant and other technological advancements made the internal combustion engine more attractive for many applications.

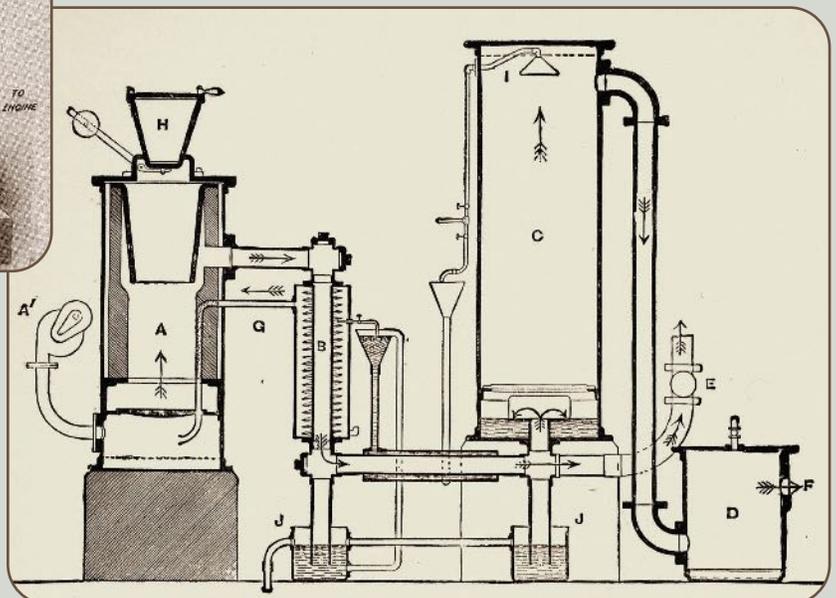
To be successful, the gas-producer and the gas engine needed to be adapted to each other. Producer gas has a lower calorific value than natural gas, and an engine needed to be adapted accordingly. The

engine needed to handle a large volume of gas. Ports and valves needed to be larger. An engine designed to produce 100 h.p. when run on natural gas would only produce 80 h.p. when run on producer gas.

The process of making producer was well understood and quite simple. It allowed for the economical production of fuel for internal combustion engines and assisted in the further spread and development of the engines that we use today.



J.E.H Andrews' producer-gas plant, marketed under the name "Stockport Gasogene." H is the coal hopper, which feeds the gas generator A. B is the vaporizer, which uses the heat of the gas to make steam. Steam travels to the generator through pipe G. Vessel C is the coke scrubber, which cleans the gas. D is the reservoir box for the gas. F is the gas outlet which leads to the engine.



MINUTES OF THE BOARD OF DIRECTORS MEETING OCTOBER 12, 2007

Members present: Tom Millett, Bob Swan, Wayne Mabb, Kelley Garcia, Jim Davis, Bob Smith, Joe Siddons, Leroy Overstreet, Gus Lukrofka, Rex McCleary, Rob Skinner, John Hampton, Slat Seeley and George Noble.

Meeting called to order at 7:00 by President Tom Millett.

Flag Salute was lead by Wayne Mabb.

President's report: No report for now but noted that the Harvest Pumpkin Festival would be Saturday Oct 20.

Vice President's report: Bob Swan had nothing to report.

Secretary's report: Wayne Mabb moved to approve the minutes of the September meeting, motion seconded by Bob Smith. Motion passed.

Treasurer's report: Kelley Garcia reported on club finances. Cash in bank is \$37,670.10, Investments total \$135,179.86, for a total of \$172,849.96.

Membership: No report

Editor's report: Rob Skinner deadline for Hit & Miss will be the 20th of October. All articles need to be with Rob by then.

Larry Madole wants to have a swap meet, parts exchange at his place on December 8th. Rob also brought materials for the library.

Purchasing: Leroy Overstreet reported that he had received putt-putt boats for Joe. He has four bags of corn for the Glendora

show. He has re-sealed the clubs JD engine and stated that there is a lot of blow-by, grinder is repaired and ready to go.

Library: Jim Davis had nothing to report on the library and stated that the Neff Park show was well attended.

Shows: Bob Smith reported that next weekend we have three shows. 1 - Glendora Historical Society's Pumpkin Festival, 2 - E. Waldo Ward in Sierra Madre and 3-Hurst Ranch in West Covina.. Hurst Ranch needed to be sanctioned and Bob moved to sanction, seconded by Kelley. Motion passed.

Next Sunday will be the Los Alamitos Air Show.

Chaffey Garcia House in Etiwanda: Bob Smith moved not to go out there this year, seconded by Wayne Mabb. Motion passed.

Victorian Christmas December 1. Bob moved to sanction, seconded by Jim Davis. Motion passed. This will be the last show of the year.

Break from 7:50 to 8:05

Safety: Joe Siddons reported that we must be careful with people coming around the safety ropes creating a hazard and we should never fill engines while they are running. He also inquired if we have enough safety gear to do three shows. Yes we do.

Prado: No report

Rubel Castle: Tom has a email from Culver Heaton and the meeting of the committee from the Castle of Wed Oct 10, 2007. Tom went to the meeting and discussed issues, any injury will be covered. They have a one year waiver and suggested that any Glendora Farm Hands personal that want to help sign a waiver for WAPA. Tom signed the MOU (2 copies) and sent them to the Glendora board for their signatures, about two weeks.

Unfinished business: None

New business: None

Announcements: Tulare Swap Meet is Nov. 4th.

Meeting adjourned at 8:35

Wayne Mabb,
Secretary



photo by Kerry Morris

UPCOMING EVENTS

November 9, Friday

7:00 p.m.

Board of Directors Meeting

The WAPA Board of Directors meeting is held at Heritage Park in Santa Fe Springs. Heritage Park Rd. is off Telegraph Road just west of Norwalk Boulevard. The meeting is held in the train depot next to the steam locomotive.

November 10, Saturday

Etiwanda Historical Society

This show has been cancelled.

December 1, Saturday

11:00 a.m. - 3:00 p.m.

Victorian Christmas

Chairman: Bob Smith

This is the last show of the year. Don't miss a chance to run that engine one more time before storing it away for the winter.

Heritage Hill Historical Park is located at 25151 Serrano Road, Lake Forest.

Take Lake Forrest Dr. from I-5 South at the 405 junction. Go east (left) to Serrano Rd. Turn left and back right into the shopping center parking lot. Enter the park to your left and proceed past the house and into our area on your right. You might want to get there early because there is only one road into the park and it gets congested early and parking is better.



December 8, Saturday

8:00 a.m.

Swap Meet & Parts Exchange at Larry Madole's yard

Load up your valuable goods into your truck, a wad of cash into your wallet, and come on out for a good time.

Don't forget to leave room in your truck so you can bring home all the good deals.

Larry's yard is on the s/w corner of Edison and Euclid in Chino.

Hit & Miss

The Hit & Miss is the official publication of the Western Antique Power Associates. It is distributed monthly to all members.

WAPA is based in Southern California, with members from across the globe.

For membership or other information, please visit our web site at www.wapa.us.

Classified Ads

**International Harvester
Corn Grinder.** 100 lb. capacity. This is the red & green grinder that was used at Knotts and run with the Sattley engine. \$350 obo. Dan Kato 562-696-4507 or twocycledan@yahoo.com

Baker Monitor, 8 h.p., horizontal. Single-rocker engine on transport with 5" Gould double acting pump. Comes with single-axle trailer. \$3000 Dan Kato 562-696-4507 twocycledan@yahoo.com

Jaeger Cement Mixer, powered by 3 h.p. Jaeger (Hercules) Model G engine. Entire unit is barn fresh, engine is free. This is a nice, complete, unrestored unit. \$875. Rob Skinner 562-694-2301 or editor@wapa.us