Bay Area Engine Modelers Club, Branch 57 of EDGE&TA

The Crank Calls

August 2011

President	Don Jones	(510) 566-3153	dj712@sbcglobal.net
Secretary	Bob Kradjian		bkradjian@comcast.net
Treasurer	Ken Hurst	(707) 257-2481	icengine@comcast.net
Events	Ken Hurst	(707) 257-2481	icengine@comcast.net
Tech Topics	Carl Wilson		toolcarl@comcast.net
Editor/Printer	Larry Zurbrick	(408) 448-5752	lz_m57@pacbell.net

MEMBERSHIP $25.00 US
Contact Ken Hurst at
(707) 257-2481
2650 Indiana Street
Napa, CA 94558

NEXT MEETING
August 20, 2011 at
Chabot College, building 1500
25555 Hesperian Blvd, Hayward 94545
Doors open at 9:00 AM
Meeting starts at 10:00 AM

Upcoming Events

August 26-28, 2011
Western Engine Modeling Exhibition at Goodguys 25th West Coast Nationals, Alameda County Fairgrounds, Pleasanton, CA

MEETING NOTES

July 16, 2011

Bob Kradjian, Secretary

President Don Jones called the meeting to order at 10:00 a.m.

New Member: We welcome Chapman Thompson to the club. He is building a Stuart Model 10 V engine as a first attempt. He is a trained engineer who is also taking classes in machining at De Anza College. Chapman immediately became a BAEM team player by helping out at our July 20 Intel engine show.

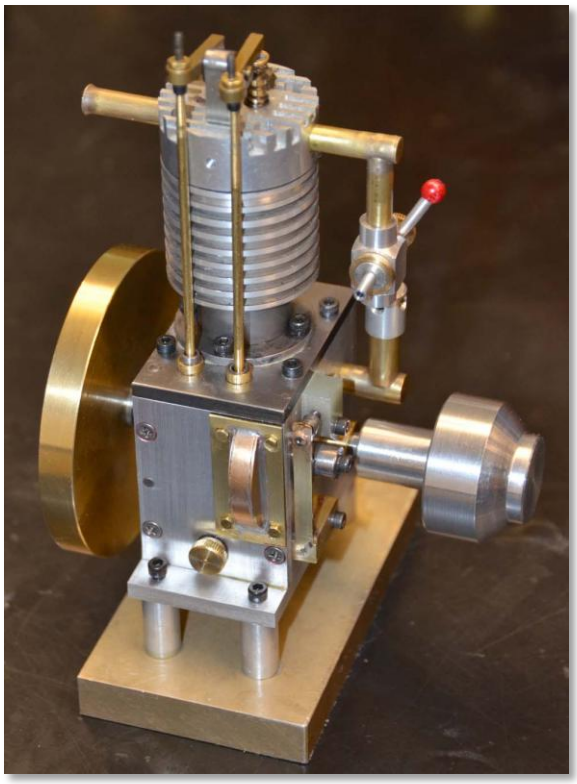
Treasurer's report: We are solvent; all bills paid, and solvent in assets. Treasurer Ken Hurst will not attend the August meeting as he is featuring his Dachshund at the Weiner Dog Races.

EDGE & TA: No activities to report.

First Pops: The big one is the firing of the Hurst-Giles-Kipp Black Widow V-8. You can see Ken fire it at:

http://www.youtube.com/user/Kensminiatureengine?feature=mhee

(It is a chore to type in these URL's, but worth the trouble. – Bob)



Another first pop has Jim Piazza is building two Upshur singles. The first fired up nicely and the second is nearing completion. Jim redesigned the cylinder head and moved the spark plug to a location at the top of the head.

Intel Show: I was asked to explain the rationale for our upcoming appearance at the Intel Open House. It was occasioned by a visit to our Palo Alto display by an Intel executive. The show featured engines by members Pretel, Myers, O'Connor, and Kradjian. Possibly a first, we also had member Jay Eitel's full-sized car as an adjunct to our display.

We have another club appearance the day before our August Club Meeting. It is the Quail Lodge Motorsports Gathering in the Carmel Valley. Report and photos are planned for the next newsletter.

Steve Hazelton tells us of his progress in developing a small engine club with an annual show in the American Canyon area north of Vallejo. It will be oriented to young people and beginner projects.

WEME 2011: Discussion concerning the WEME Show combined with the Good Guys West Coast Nationals the 26th through the 28th of this month followed.

Exhibitors should unload and set up on Thursday the 25th. It will require hand hauling or use of a golf-cart to get displays into the hall after the show starts on Friday morning. We will be in the Agriculture Hall near the Race Track Stands. It's to the left as you go through the tunnel from gate 12. Gate 12 is accessed off Valley Avenue (nearest large cross street is Bernal). For information concerning the RV Park, call (925) 426-7600.

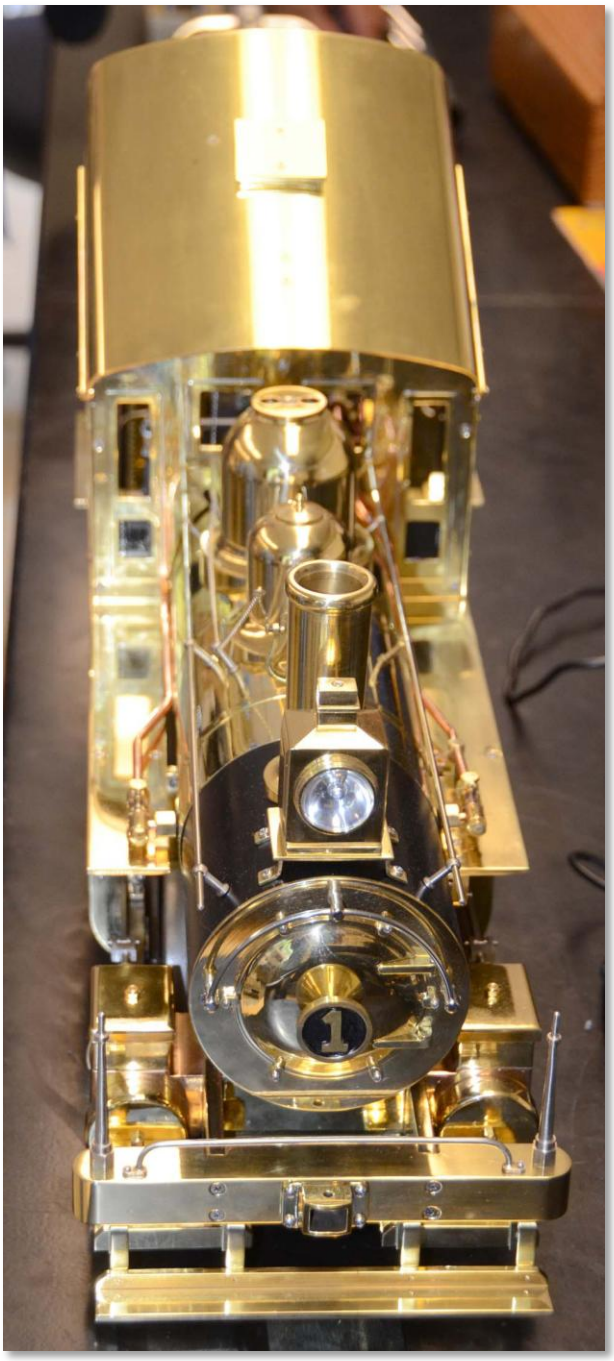
Exhibitors should unload and set up at Building P on Thursday. You can drive right up to the building on that day only. After the show on Sunday, you can drive in again to pick up your models. When you get in the building, stop first at the WEME booth and get your space assignment, badges, show passes and parking tickets. Best if you bring your engines on Thursday even if you won't be there for the entire show. If you don't get them Thursday, you will have to have a friend who will bring them home to you or you will be faced with paying parking during show hours just so someone can stop what they are doing and walk a ways to bring you your tickets. Please, either come Thursday or arrange to have a friend bring yours to you before you drive to the show. It is uncertain whether we are being given general parking tickets or the tickets that allow us to park in the Vendors parking lot.

The RV Park is full if you want full-service. No service spaces (dry camping) are available the last we heard.

We have security inside the building at night so everything should be safe.

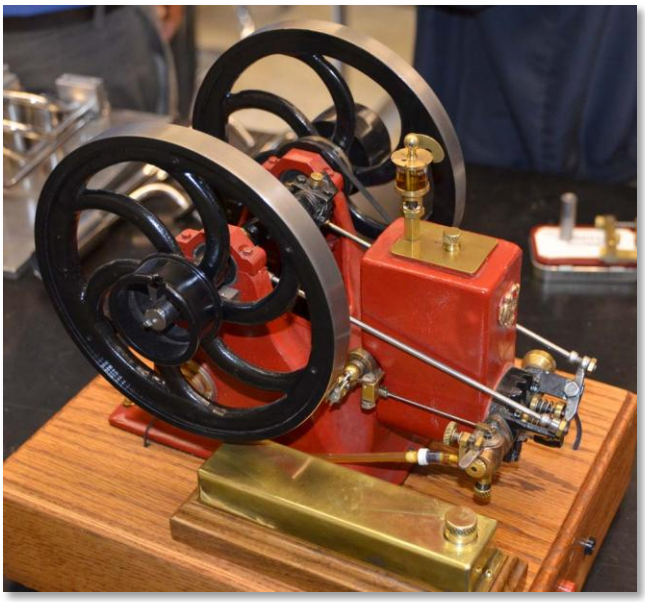
BITS AND PIECES:

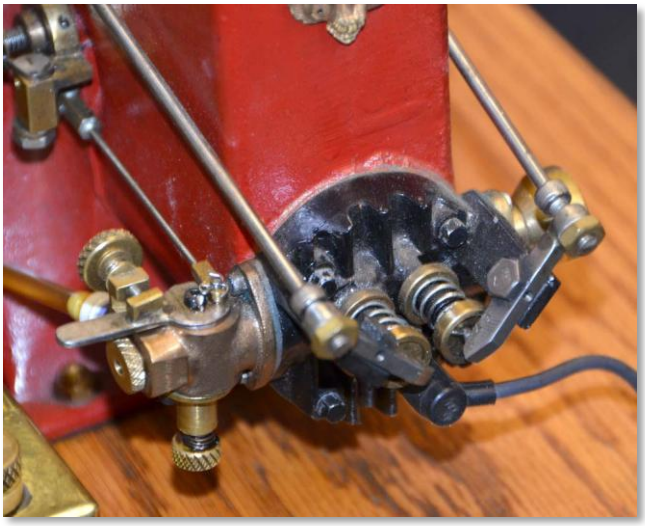
John Gilmore has finally finished his "Pennsy" Switcher. It is spectacular with elegant fit and finish. It runs nicely on air, but he has decided not to steam it. It's for display only and John is anxious to move on to his next project.

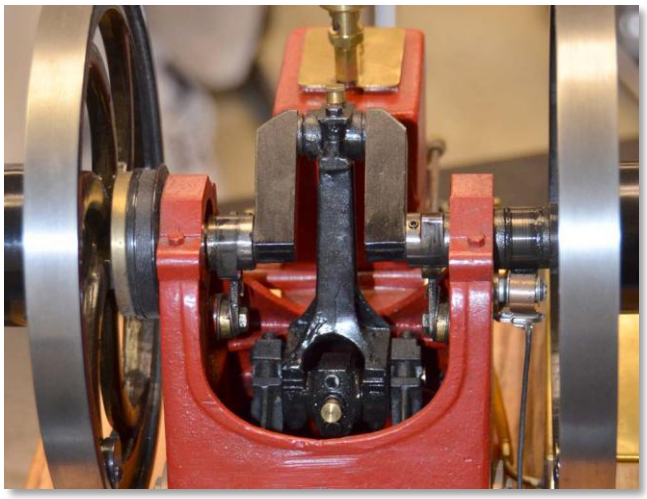


George Gravatt showed us his Atkinson Cycle Engine. This is kitted by our own Joe Tochtrop. George says that the internal pieces are cast in aluminum and are fragile. Fixtures are needed to safely hold them. There are 10 pivot points specified as bushings. George changed them all to ball bearings except for the mains. This is a highly unconventional engine dating back to the 1886. It would be a fool's task to describe its actions. Far better, go to this web site for a fabulous animation.

http://www.animatedengines.com/atkinson.shtml.

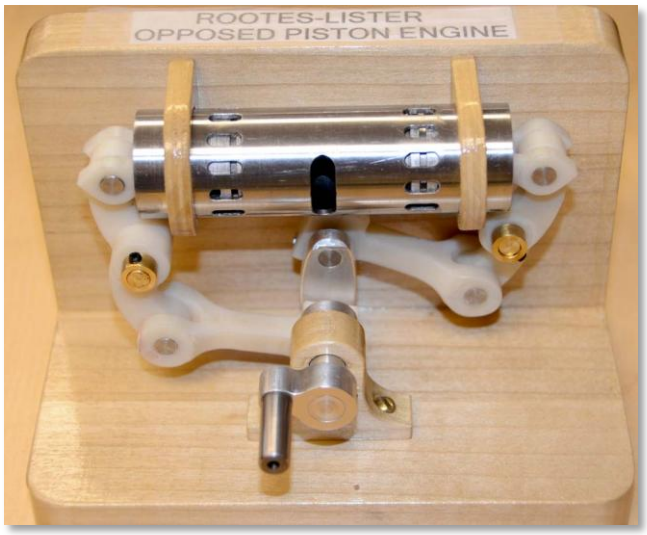






Under George's magic touch, it fired immediately and ran smoothly. George has a talent for improving casting set plans and creating solid running engines.

Joe Tochtrop also kits the "Economy" Hit and Miss.



Pat O'Connor built a nifty hand-cranked display for a Rootes-Lister opposed-piston engine. See photo.

Again, this is a highly unusual engine that defies oral description. The remedy is a series of diagrams at:

http://www.oldengine.org/members/diesel/Rootes-ListerTS3/TS3.htm.

Along the lines of opposed-piston engines, recall that we will be seeing Clen's amazing Deltic Engine at the WEME show late this month.

Dwight Giles showed us exhaust manifold fixtures for the new V-8 project. He used 300 series stainless, non-magnetic tubing of 0.035" thickness. All welds were TIG and of the fused type with no filler. Dwight devised a hardened tube rounder to correct the out-of-round condition that follows most tube cut offs.

Carl Wilson gave us the wrap-up of his series in Model Engine Builder on camshaft design and manufacture. Hang on, more from the master himself.

We had a photo last month <*and appearing again below– Ed.*> of the famous 1913 Peugeot that many feel is the first, truly modern racing engine.

It was this engine that inspired Harry Miller to copy and improve the design.

But, who designed the wonderful Peugeot? The three designers were not trained engineers, but racecar drivers! They were Peugeot drivers Jules Goux, Georges Boillot, and Paolo Zuccarelli who came over from the Hispano-Suiza team. Draftsman Ernest Henry, completed the group. The established Peugeot engineering staff was so incensed at the notion of lowly drivers creating engines, that they initially labeled them as fakers ("Les Charlatans"). Despite this, these drivers designed an engine that was so advanced that it displayed the basic racing architecture still in use today. It immediately dominated European racing and was exported, as noted, to America winning the Indianapolis 500 in 1913. Next time, learn how this engine developed into the "Offy" that we all know.

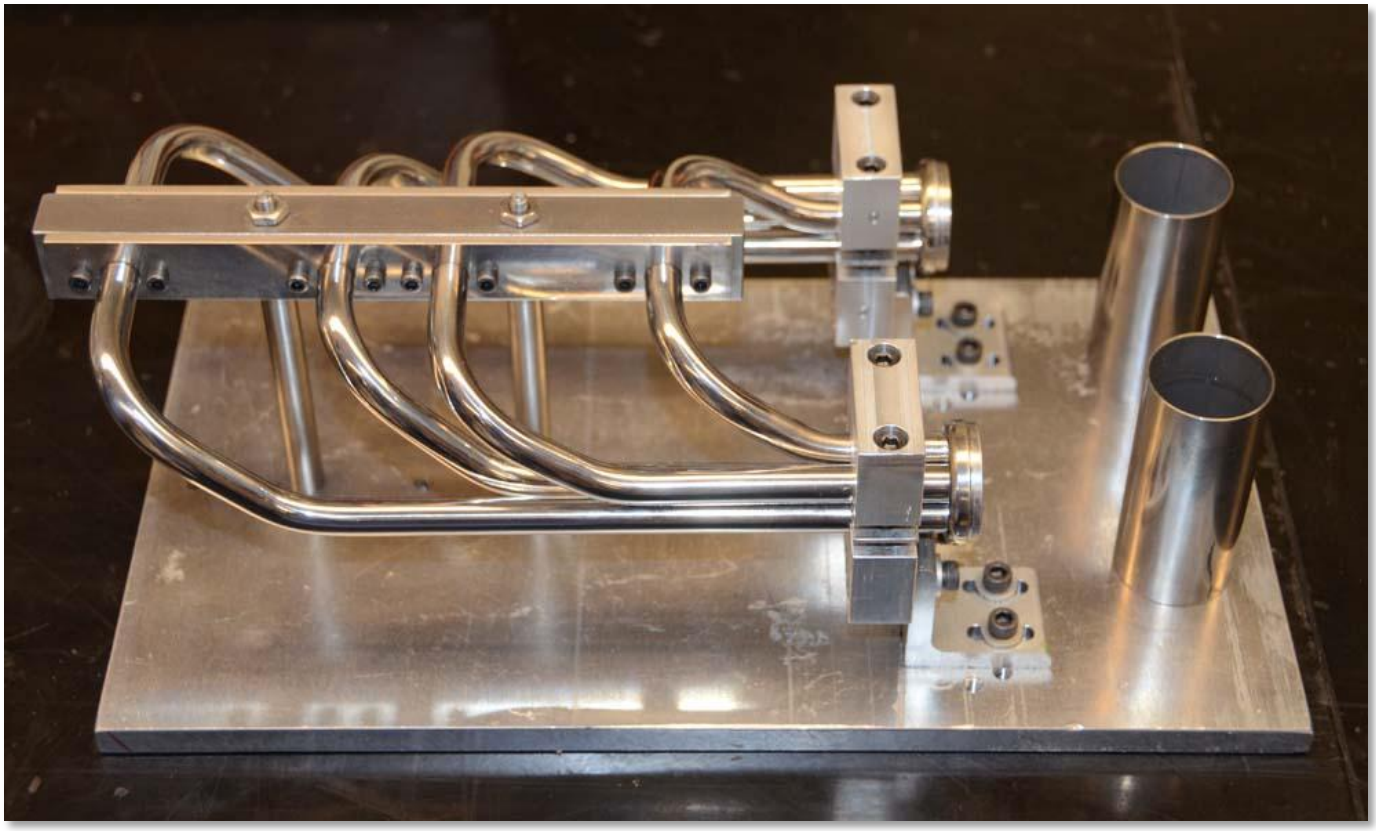
Finally, last month I spoke of a possible French engine that pre-dated the Miller and Offenhauser engines. Some authorities consider it to be the first truly modern racing engine. To our surprise, that very engine (and car) was at the Palo Alto Concours d'Elegance. It was, of course, the 1913 Peugeot. See the photos that follow below. This is not a replica; it is the exact engine and car that won the Indianapolis Race in 1913! There will be a bit more about the development of this engine in the next newsletter.

TECH TOPIC:

7-16-11

Carl Wilson

Dwight Giles on making Exhaust Headers:



It sure would be hard to find a prettier set of headers for the Black Widow V-8 engine under development by Dwight Giles, Ken Hurst, Don Jones, and Jim Kipp. Dwight made this set and at the July meeting of Bay Area Engine Modelers told us how it was done.

This photo shows the thin wall stainless tubing bent to shape, cut to length and assembled into the welding fixture. Dwight uses a commercial tube bender but noted that it tends to deform the ends of the tube and this makes fitting the tube into the manifold plate difficult. He solved the problem by making a clamp block that fit over the end of the tube. The center hole is 0.006" smaller than the OD of the tube: this provides a bit of crush and maintains the shape of the tube end.

The manifold plate is drilled to the ID of the tubing and counter bored on the outside face to the OD of the tube. After assembly in the welding fixture the tube is TIG fusion welded to the manifold plate. No filler rod is used. The holes in the plate could be drilled through at the tube diameter and the ends of the tube welded to the plate on the inside. That is an easier weld to perform but Dwight prefers the counter bore method and weld on the outside.

The aluminum blocks at the right side of the fixture are tube nests which hold the ends of the tube in place during welding to the collector plate – the disc at the ends of the tubing. The last step is welding the collector tube to the plate. Here's what it all looks like when done:

Dwight says that it is important to fully polish the tubing before welding. Heat oxide discoloration should be wire brushed immediately after welding: do not allow the weld to cool to room heat. A cold weld is hard to polish.

There you have it! I'm sure this does not exhaust the manifold topic. Thanks Dwight.