

The Crank Calls



May 2012

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MEMBERSHIP \$25.00 US

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NEXT MEETING

May 19, 2012 at
Chabot College, building 1500
25555 Hesperian Blvd, Hayward 94545
Doors open at 9:00 AM
Meeting starts at 10:00 AM

Upcoming Events

BAEM meetings:
May 19, 2012
June 16, 2012
August 18, 2012
Palo Alto Concours, June 24

MEETING NOTES

April 21, 2012

Bob Kradjian, Secretary

Meeting was called to order at 10:00 am by President Don Jones

Visitors: We extend a welcome to visitor Jack Hutchens, Sr. who came with Marc Cave all the way from Nevada.

NEW MEMBERS: Also a welcome to Dan Mobati who is an accomplished collector and restorer of old motorcycles. We extend a welcome also to Robert Leggoe from Laney College.

TREASURER'S REPORT: We are solvent. Please send in your dues to continue receiving the newsletter.

ACTIVITIES: John Palmer told us of a May 27 Corralitos breakfast sponsored by local service clubs. Get details from John at the May 19 meeting.

The Dream Machine show is now history, and for the first time was a two-day affair. I think this is a plus, as it relieves the tremendous congestion of parking and traffic. I attended Sunday and it was a

pleasant experience. Saturday was the heaviest attendance day.

Steve Hazelton reported on the Ag Day show at the Vallejo Fairground where 3,000 third-graders packed our club's display of engines. The sponsors were delighted with the display and the club has been invited to come again next year.

The Palo Alto Show is the next club event. It is June 24. Details will be published in future newsletters

WEME Report:

Mike Rehmus reported on our meeting with Harry Daviess, Vice-President of Events Operations and Heather Nothing, Event Coordinator. The GoodGuys organization continues to enthusiastically support us and has offered to pay the rental on our compressor system this year. This was our major out of pocket expense for the last show. They will also increase the signage to direct people to our exhibit hall.

Discussion of creating a large pond for boat models was concluded with a decision to not pursue this venture.

Out of area attendees for the WEME show include Paul Knapp and Jerry Kiefer. Jim Moyer is hoping to drive down from Washington State, and is working on details to allow for this.

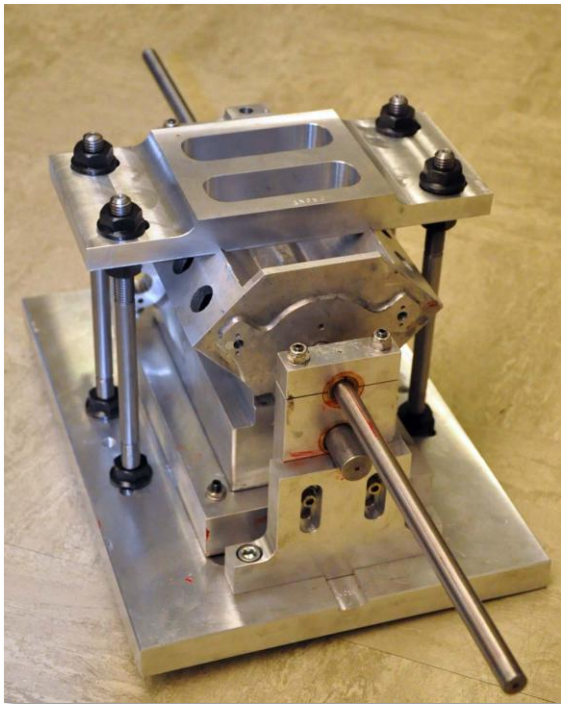
Exhibitors for WEME, please sign up even though it's months away. Pat O'Connor is the contact for this.

Lou Chenot was featured in a recent Ripley's "Believe It Or Not" cartoon column with his amazing Deussenberg. Now, THAT's a first for a BAEM member. It's just one of the many accolades he's rightly received.

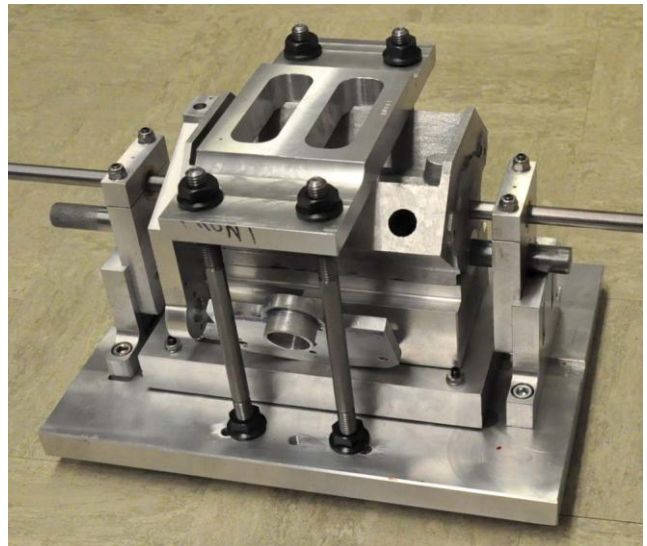
The WEME show web site is again under our full control due to excellent work by Jim Piazza.

BITS AND PIECES

Members with engines in progress are encouraged to bring to meetings so that we can all enjoy the progress.



John Gilmore showed the very sturdy and elaborate jig for line-boring bearings on his Black Widow V-8. He uses the 90-degree head for his milling machine. The boring bar can hold to three tenths. He will make an adapter to allow him access to the firing deck when he does the upper end machining. This makes at least two of our members working on this ambitious, new project.



John Gilmore describing his Black Widow V-8 project while President Don Jones looks on

The other is James Freel whose meticulous work we saw earlier. He is working currently on the smaller pieces. James showed a piston and holder as well as rocker arms at a previous meeting.

Ron Bement had a video posted of his latest V-8, this one a flathead to match up with his Ardun overhead-valve conversion that we saw at our last Pleasanton show. The way to see this is via: <http://www.youtube.com/watch?v=LmNiZ0yVLo8>

The text has some inaccuracies, but is mostly on target. The poster misunderstood Ron's intent to later build the Ardun that we enjoyed at the 2011 WEME. Ron is a retired IBM material engineer.

His engines not only run well, they are beautifully detailed and finished.



Jim Bove displayed and ran a compressed-air radial engine of original design. Jim's modesty made for brief comments from him. He told me later that he had to do a good bit of "whittling" on the interior of the crankcase to gain clearance for the master rod and links. He complained about an out of balance condition, but it certainly seemed smooth as he demonstrated it for the members. Jim is a remarkably innovative scratch-builder.



I showed a static model replica of the old WLA-45 Army-issue Harley-Davidson. This model was made by a dental technician who exhibited it at the Men, Metal, and Machines show in Visalia several years ago. It is a one-off



model of remarkable detail and fidelity. He made a number of lost wax castings and combined them with remarkable skill. If Jerry Kiefer brings his Harley for the WEME show, perhaps he would like this displayed alongside. The new owner of the 45 is Dan Mobati.

John and Ellen Palmer sent a nice YouTube video on a steam engine built entirely of glass! This is worth a look!

<http://redux.com/stream/item/2134517/Working-Model-of-Stephenson-s-STEAM-ENGINE-made-of-GLASS-Rare>

TECH TOPIC

Carl Wilson

The development of a new design model engine has the same problems as the full size – changes need to be made. Dwight Giles talked about problems with the electric starter and the modifications that he designed and built. The starter motor did not quite have enough torque to turn the motor over at a sufficiently high speed to start reliably so Dwight increased the gear ratio. But this brought into play another problem: the starter needs a good “Bendix” drive. If the starting mechanism does not release the motor armature it will be driven by the ring gear at a very high speed and probably destroy the windings on the armature.

Dwight’s do-it-yourself starter uses some Teflon and steel parts mounted on a 3/16” square shaft. The project for this Tech Topic is making square holes in these parts to fit the shaft. Dwight made this nifty square hole broach:



The broach will make a 3/16” diameter round hole into a 3/16” square hole by simply pressing it through a hole in the work. The round portion of the broach is at the right hand end – this end (the pilot) is placed in the reamed hole and the broach pressed through with an arbor press. There are eight cutting edges which incrementally remove the corners to make a square. The first edge is a regular octagon, and each successive edge has narrower “corners” and wider flats until the last which is a full square.



The broach blank begins with an oversize piece of tool steel – in this case 4130. The 3/16” square cutting portion is milled, and then the shank and pilot are turned to 3/16” dia. The cutting edges are turned with a round nose triangular shape tool. The corners of the cutting edges are milled into octagons: the first edge is a 3/16” regular octagon,

and the following octagons have less of the corner of the original square cut off and the last edge is the full square.

Dwight used his customary hardening procedure: chuck the tool lightly in the drill press, turn slowly while heating evenly with a torch, then drop it into a quench tank on the drill press table.

Would you like to know more? Mike Rehmus is planning a detailed article on this broach for a future issue of *Model Engine Builder*.