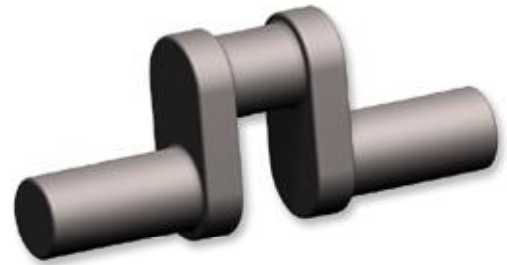


The Crank Calls



March 2014

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MEMBERSHIP \$25.00 US

Contact John Gilmore at
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NEXT MEETING

March 15, 2014 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:

3rd Saturday of the month except December

MEETING NOTES

February 15, 2014

Bob Kradjian

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

VISITORS: Mark West is a guest of Paul Denham. Welcome to Mark, we hope you will return.

MEETINGS: While we were meeting in Hayward, a dedicated group of BAEM members was putting on an engine show at the Hobby Expo. This show was at least twice the size as last year, and filled the facilities at the Petaluma Civic Center. Our group was well received by large crowds. Members, Al Aldrich, Dave and Karen Palmer, John Gilmore, Dave Mecchi, and Mike Stimmann represented us. All agreed that the show was a smashing success and should be on our calendar for next year.

The Hillsborough Concours will be held on July 20 this year. If there is interest on our side, and on the side of the Concours organizers, we may make an

appearance. In the past, we have appeared there at least eight times.

The newsletter distribution by e-mail is going well says newsletter editor Larry Zurbrick.

We have negotiated a twenty-year deal to secure our domain name. It was a good purchase at \$200.00.

TREASURER'S REPORT: Club dues are payable. Please remit dues to treasurer John Gilmore.

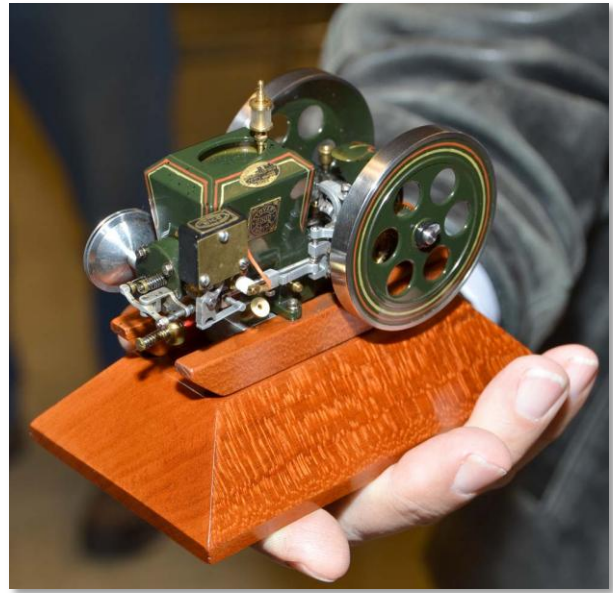
CLUB BADGES: If you need a badge, contact Mike Rehmus (mrehmus@byvdeo.com) who has offered to produce them.

BITS AND PIECES:



Mike Byrne took up Dwight Giles kind offer of a cylinder and frame assembly as well as “plans” for an Upshur farm engine. The word “plans” has been placed in question because Dwight made so many improvements and changes, that it is virtually an entirely new build. Despite this “design creep” (note that design creep describes the plans, not Dwight) Mike is progressing nicely on the build. He mentioned a few of his concerns that included rigidity of fixtures and coolant issues. He was also able to cut gears with Dwight’s help.

I showed a George Luhrs engine in commemoration of George’s passing on February 2. This remarkable little Stover Hit and Miss is in 1/8th scale. Please go to George’s fine web site at minimodelengines.com for an extremely well done exposition of his remarkable work. If you are at all interested in micro-miniature model engineering, don’t miss this! There may be a quiz at the next meeting! George was a wonderful human being and an exquisite



artist. He was also an honorary member of the Bay Area Engine Modelers. He received, and enjoyed our newsletter and hearing of our activities.

Sadly, there is another death to report. Our good friend, Joe Martin, the founder of Sherline Tools passed away on February 12. Our club has enjoyed a long and pleasant association with Joe and his staff dating back to the PRIME days in Oregon. His generous support of fine craftsmanship is unmatched. His fabulous museum in Vista will be an enduring tribute to a life well lived. I had the privilege of spending several relaxed hours with Joe and Craig Libuse just seven months ago at the museum. He spoke mainly of the great craftsmen he had known, as well their contributions and friendship. His two books and straight talk are also a fine part of his legacy to a hobby he loved.

Ray Fontaine continues his progress on his version of Randall Cox’s visible four (he calls it the “Open



Four”). His efforts have been bolstered by the a Little Machine Shop CNC milling machine. He has been fashioning the rocker arms and cam lobes using Alibre and Mach III.

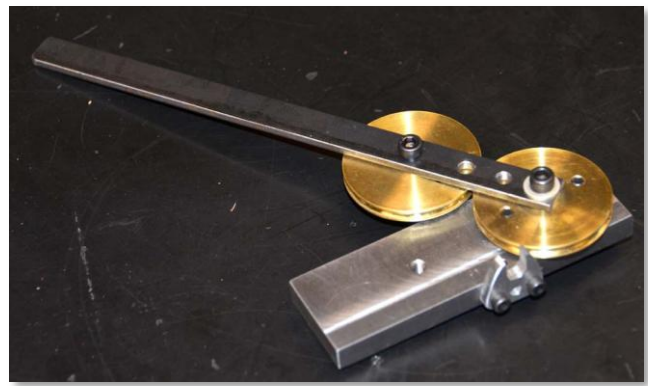
Cam blank is secured with a setscrew for machining. He was troubled with tool chatter and some tooling marks, but the result is actually excellent and will function nicely in a low-revving engine. The six-inch flywheel will be next. With complex and curved spokes, it will be a challenge for the CNC machine.

Steve Jasik described his progress on his thirteen-year-long build on a Corliss Steam engine. Dwight urged him not to rush into anything. He has three major pieces left to complete the machine. He also explained how disposable razor handles make wonderful handles for Swiss files if you make a cut across the neck and drill a pilot hole for the file.

Steve also mentioned the Hong Kong dx.com web site. They have amazing bargains and free shipping for most items.



Dwight showed us the centers for a crankshaft fixture. It uses four separate pilot holes. He also told us about a method for cam lobes that can be cut on a lathe quickly and easily.



A commercial customer needed six protective bent rod cages for expensive sound sensors. Dwight adapted some scrap discs into a shop-built rod bender, and gave us a demonstration. It was quick and easy, resulting in perfect bends. For the headers on the Black Widow V-8's he used a bender with two separate radiuses (radii for you Latin scholars). Thin-walled stainless was the material used.

Mike says that the Cleveland Twist Drill Company web site has a PDF file for the numbers involved in drilling holes and for tapping applications.



Jim Piazza showed us some very fine work on the side plates described for Ron Colonna's 270 quarter-scale Offenhauser engine. Using a build-up of two pieces and Lock-Tite for the plate, Jim used a 1/16th end mill and his 3-axis CNC mill to cut the flutes. This resulted in a finely detailed pair of side plates. For additional information, he was able to see and photograph a Root's-Blower supercharged

miniature Offy engine owned by Michelle Brading. Her late father owned the engine, which is thought to be the only one of its type in existence. Jim also shared some photographs of her wonderful car collection with the group.



Jim Freel is now working on the supercharger for his V-8 build. The end caps and blower block are machined from 6061 aluminum on a three-axis CNC machine.

He is using Surfcam (surfcam.com) which allows the part blank to be rotated to a 45 degree angle to allow easier machining. This was necessary in some areas for the 1/8th inch tooling to reach into pockets. Surfcam is available in from two to five axis versions.

The one-inch wide, by two-inch long vanes with curved outer edges will be next. They will also have small end pads.

A discussion of Gearotic Motion (gearotic.com) followed. Gearotic can generate programs for the

vanes or lobes. It can generate up to four-axis code. The cost for the program is about \$150, but there is a free trial available without code.

Scott Overstreet needed a pressure oil can for his venerable Bridgeport. He modified a Lubrimatec grease gun by taking off the bottom where he found a rubber plunger. He removed all the remaining interior parts and soldered a cap over the bottom. He also soldered in a tube leading from the bottom of the can to the pump at the top. He was then able to insert heavy oil in the cavity by way of an insertion nipple and air vent. He uses Oregon chain saw bar lubricant, and reports that it works perfectly. All agreed that molybdenum grease was to be avoided.

Mike Rehms teased us by announcing that he was planning a photo shoot of John Palmer at the Hiller Aircraft Museum (San Carlos Airport) for February 18. John will be standing by his wonderful Wright aircraft engine that has been on display for some years. The recognition is richly deserved. For several years the engine had no mention of John's involvement. BAEM folks who were around during the centennial of flight will remember that John made the cylinders for most of the replica Wright engines fabricated by other builders all over the country. If you are interested in the rich history of the Wright brothers and their engines, make a trip to gutenberg.org/38739. There you will see—for free—a wonderful book by Leonard Hobbs on the Wright brother's engines. It is authoritative and well illustrated. I found the description of their "shop engine" to be fascinating. It was a 1901 horizontal, single cylinder hit-and-miss of their own (with Charles Taylor) design. Note the remarkably ingenious way they used a single cam, running at crankshaft speed—not reduced by half—to actuate the exhaust valve. The descriptions of the original Wright engine and the vertical one that John built are quite fine.

Mike showed us a nifty Flashlight. Costco sells two of these for twenty dollars. This is a Duracell Durabeam Tactical-500 lumen flashlight. It is powered by three "C" cells and will give a lot of light for a long time. I looked up this model on Amazon and it's \$28.48 for one.