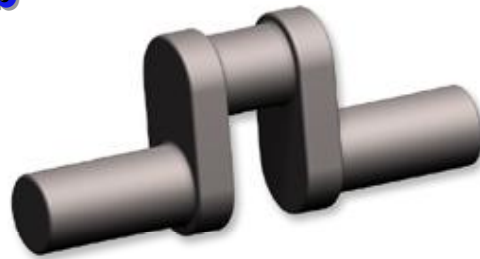


Bay Area Engine Modelers Club

The Crank Calls



April 2016

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Tech Topics		
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MEMBERSHIP \$25.00 US

Contact Paul Denham at
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DUES ARE NOW DUE

NEXT MEETING

**April 16, 2016 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

MEETING PLACE FOR April 16th

We will meet this month (April) at Chabot College in Hayward.

We would ideally like to alternate meeting locations on a monthly basis between Chabot College and the Golden Gate Live Steamers building in Tilden Park as noted in last month's newsletter. However, we do not have a long term commitment from Chabot College for this arrangement at this time.

We would like to get input from our members on their thoughts of a permanent home at the next meeting. If you are not able to attend, please let your wishes be known by e-mail (or snail mail) to our President Paul Denham (e-mail address in header above).

MEETING NOTES

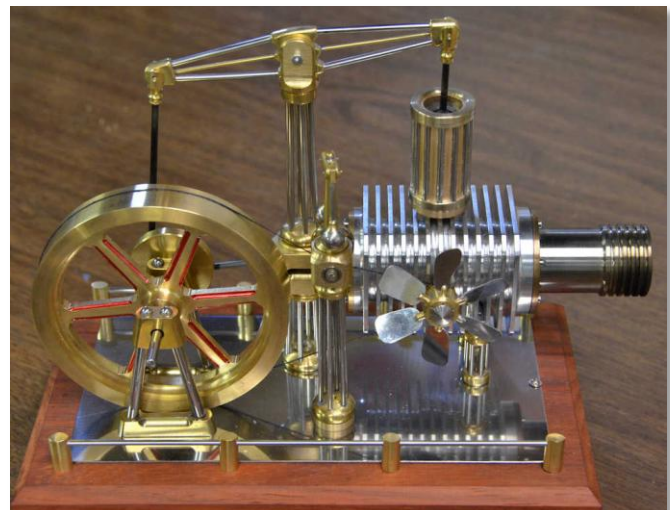
March 19, 2016
Larry Zurbrick, Editor

Anthony Rhodes gave a quick overview of the "operating procedures" and safety briefing for the GGLS meeting room.

President Paul Denham called the BAEM March 2016 meeting to order at 10:00 AM.

VISITORS: We had several visitors at our March meeting. Steve Zetter traveled from Reno to attend our meeting, Robert Tomrose (a friend of Mike Stimmin), Mark Johnson (GGLS President), and Richard Croll (GGLS Rolling Stock Committee Chair).

FIRST POPS: Not exactly a First Pop but would qualify as a first "twirl", Bob Hettinger fired up a first twirl of his Stirling engine! He says it was his "Winter project" and was inspired by Paul Denham's Stirling engine he saw several months ago..



EVENTS:

We will show our engines at Golden Gate Live Steamers meeting on either the weekend of June 4th or 25th (TBD) - stay tuned! Contact Steve Hazelton if you can bring an engine or two!

Penngrove Power one day show will be held July 9th in Penngrove, CA.

We have been invited to display engines at the USS Hornet Museum in Alameda on July 4th. More details at upcoming club meetings.

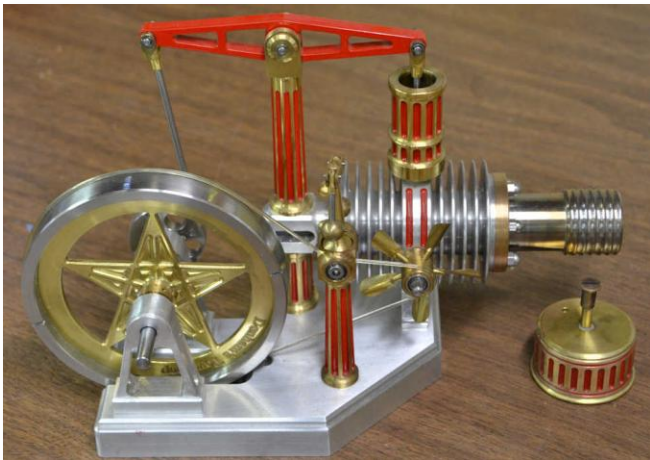
Benicia mini Makers Faire on April 16th in Benicia, CA. We are prominently featured on their web site. Unfortunately this conflicts with our next club meeting. For information on the Mini Maker Faire see: <https://beniciamakerfaire.com/>

See <http://www.baemclub.com/pages/Events.html> website for more information on events.

TREASURER'S REPORT: Paul Denham says that we are solvent. **He is accepting dues for those who need to re-enlist for 2016. Dues are \$25.00 per year.**

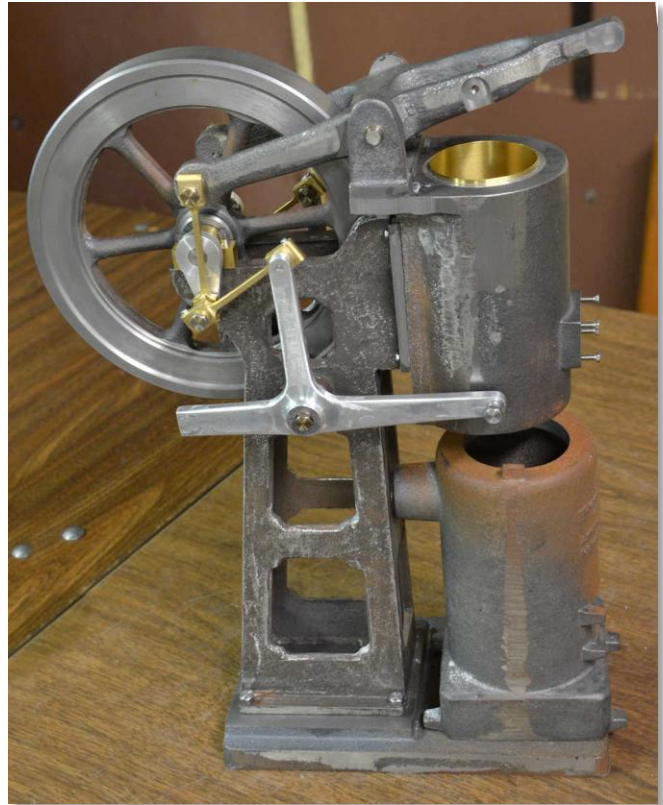
CLUB BADGES: If you need a badge, contact Mike Rehmsus (mrehmsus@byvideo.com) who has offered to produce them.

BITS AND PIECES



Paul Denham showed and ran his Stirling engine. He says it's a hit at shows he's taken it to and is frequently asked, "What does that do?" usually pointing to the governor. His answer is, "Absolutely

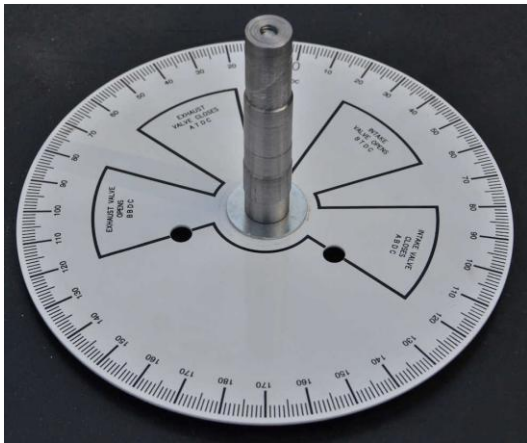
nothing!" and proves the point by removing the governor as the engine is running.



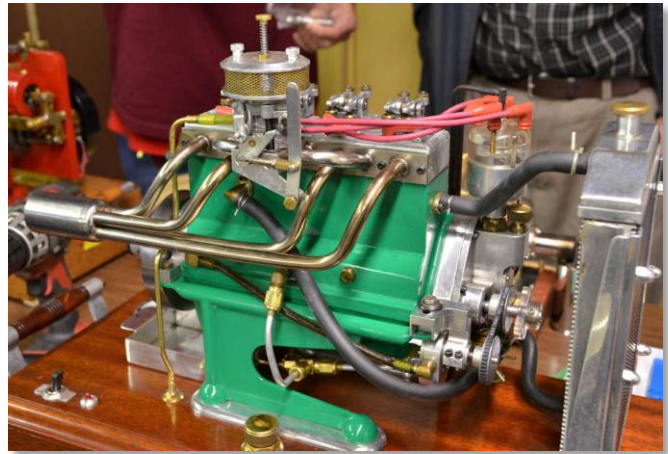
Paul is making progress on his Denny improved hot air pumping engine that he showed at last month's meeting. The plans called for plain bearing but Paul decided to modify the design to use all ball bearings. Dwight Giles provided Paul with some brass to finish off the heat exchanger side. Paul says the castings are still available. Paul found the US Patent from the late 1800's and says it's a fascinating read.



George Gravatt brought and ran his horizontally opposed piston engine. It is his own unique design. It's one of three horizontally opposed engines he has built. There are no plans, George just based it on an O'Connor wooden model he had seen and "Just made it up as I went along".



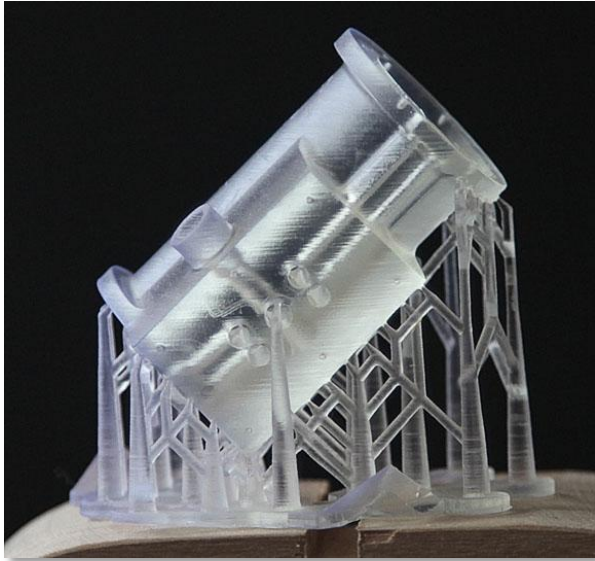
Jerry Franklin made a "indexer" from a cam degree wheel purchased from an auto parts store. He uses it to index the headstock of his lathe when he scribes hand wheels.



Dwight Giles brought his Black Widow 4. He started out with castings for the engine block and oil pan and no plans. The engine is pretty much Dwight's own design. Dwight said it will run up to about 9,500 RPM



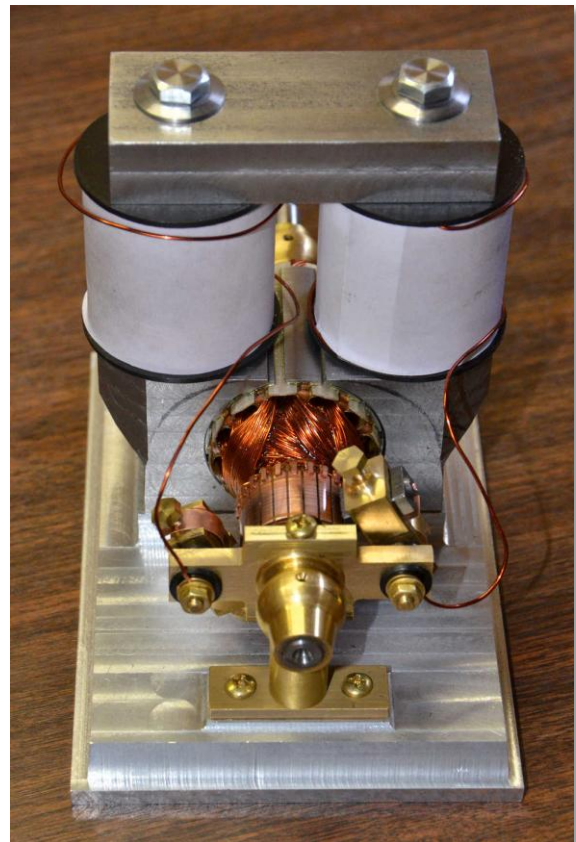
Dwight modified a carburetor for Al Aldrich's Holt engine. Dwight converted the carburetor from a float type to a "standard" carburetor without a float at Al's request. The needle valve has a 4-48 thread that Dwight single point threaded. In a float style carburetor the fuel tank is above the needle valve. On the Holt model the fuel tank was not visually appealing being placed higher than the carburetor. With a standard carburetor the top of the fuel tank is slightly below the carburetor's needle valve.



(photo above courtesy of Jim Piazza)

Roy Anderson is in the process of making two Lady Stephanie steam walking beam water pumps which is a design that Tubal Cain from England came up with. Roy purchased a casting set and later found out that fellow member Tom Armstrong also had a casting set that he "donated" to Roy. Hence, Roy is building two sets. The brass casting shown above is for the steam cylinder that operates the water pump. The clear plastic version was made using a crowd funded 3D printer from Formlabs (formlabs.com) which Roy purchased. Jim Piazza and Roy modeled the cylinder using Alibre CAD software. The 3D printer uses a laser polymerized acrylic photopolymer which is built up in 0.05 mm layers. The plastic cylinder took 4 hours to print. The finished faces on the plastic cylinder came out within 0.002" of the design value.

Maintaining the tradition of starting more projects than one can finish, Peter Lawrence showed us his progress on his Coles Cretors Popcorn Engine cylinder.



Breaking this tradition Peter finished his Thomas Edison dynamo which he designed himself by looking at photos on the internet. The armature is from an 110V electric drill. He is planning to drive the dynamo using something like the Cretor's steam engine.