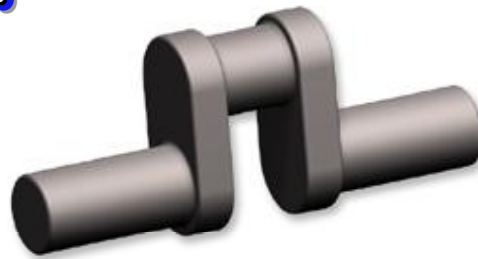


The Crank Calls



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MEMBERSHIP \$25.00 US

Contact Paul Denham at
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NEXT MEETING

**March 17, 2018 at
Golden Gate Live Steamers
Tilden Park
Berkeley, CA**

Doors open at 9:00 AM
Meeting starts at 10:00 AM

Upcoming Events

BAEM meetings 3rd Saturday of the month

- March 17, 2018 @ GGLS, Tilden Park
- April 21, 2018 @ GGLS, Tilden Park

MEETING PLACE FOR March 17th

We will meet this month (March) at the Golden Gate Live Steamers meeting room in Tilden Regional Park, Berkeley, CA.

MEETING NOTES

February 17, 2018

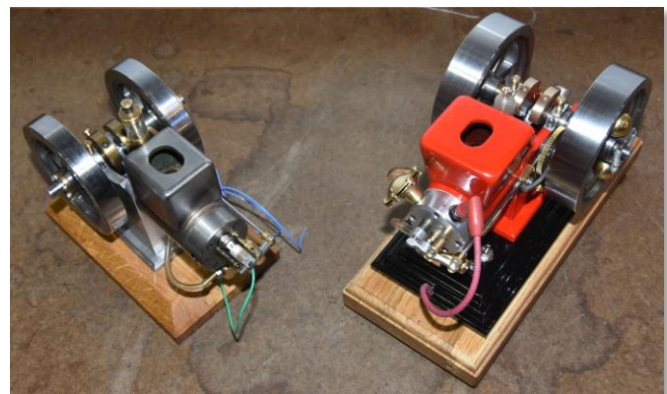
Bob Kradjian, Secretary

President Paul Denham called the meeting to order at 9:59 am in the meeting room at the Museum of American History in Palo Alto.

VISITORS: There were none.

FIRST POPS: Paul Denham has his modified GEM 1 hit and miss engine running nicely. (In the unlikely case you've forgotten, GEM 1 stands for Giles Engine Model One). Paul used a single Viton O-ring for this engine instead of a cast iron ring. It was used to achieve a reduction in friction to assist in slow running. Paul has also upgraded the spark power with several of his excellent modifications including a hefty over plug coil. Initially, it was fitted with a vapor carburetor that failed to work consistently. He then made a traditional carburetor that works quite well. The engine features a pink LED to show that the ignition is alive. The lovely

hardwood base is from the last remaining piece of a toilet seat cover. There will be no more of those, folks. Paul ran the engine at the end of the meeting. The runs were short and it was determined that the gas tank vent was plugged. Opening that affected an immediate cure.



MEETINGS: The next two meetings will be held at the Golden Gate Live Steamer's meeting room. Steve Hazelton tells us that a professional video photographer, Mike Bouyer, would like to make a video of BAEM members and their running engines. Mike's programs are seen on "Greater Bay Area Talent Television" also seen as: GBATTV. Currently, the se programs are free to view. The BAEM video will be aired on GBATTV.com. Once

the footage is edited, Mike will send us a link to the footage.

Steve projects this to be a professional video to promote the club and increase membership. Steve also plans to feature it on our BAEM Face book page. So, bring an engine to run at the March 17 meeting!

TREASURER'S REPORT: We are solvent and accepting dues for 2018.

Dues for 2018 are now due.

Dues are \$25 a year. Starting with the calendar year.

Check payable to BAEM

Mail to:

Deirdre Denham
1937 Merchant St.
Crockett , CA 94525

Or bring dues to any Meeting.

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

BITS AND PIECES



FLYWHEELS: Dwight Giles gave us a master class on making built-up flywheels instead of cast iron wheels. They are assembled using silver brazing. Details on building the spokes were first explained. Following that, the carefully described hub is constructed and placed in a jig. This holds the components together in proper alignment. Dwight uses oxy-acetylene with an aircraft torch, lots of flux, and grade 4 or 5 silver solder. The ideal gap for pieces to be silver soldered was discussed. One to three thousandths of an inch seemed to be the consensus after some discussion among the members. After soldering and when placed on a mandrel, a cut of only one or two thousandths was required to true the wheel.



He passed the jig around to the members to see along with two finished flywheels. The finished

wheels are best described as “Beautiful”. An advantage of making your own flywheels is that you can fashion them to your exact desired dimensions.



Peter Lawrence showed us a distributor patterned after a magneto for his Merlin V-12 project. He followed Dwight’s advice for making the distributor cap from Lucite to gain excellent protection from arcing, and the ability to see the actual spark path when diagnosing faults.



Carl Wilson brought a pair of commemorative engines purchased at the Gears Show in Portland, Oregon. These were sold as kits featuring a different model each year. The simpler of the two was a double acting “wobbler”. The other is double-acting engine based on an open column launch design. The valve control is located on the crankshaft with two grooves. One groove admits the steam and the other allows for exit. The lagging is of oak. He made a wooden mock-up clearly showing us the timing valves controlling the opening and closing of the steam (or air) stream. Carl followed this presentation with the running of both engines on low pressure compressed air. Carl also discussed making dome hear cap screws that

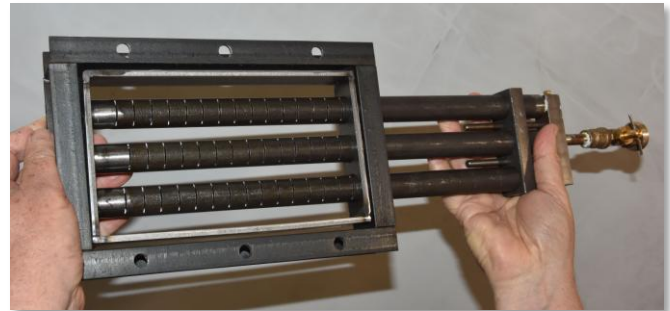
adorned his two engines and provided the following design information:

Head height = body diameter of the screw

Dome radius = 1.75 x body diameter (approx.)

Across the flats = 1.5 – 1.7 x the body diameter (Use the nearest fractional or metric wrench size)

This link will take you a video of making these screws on Carl's Rivett turret lathe: <https://www.youtube.com/watch?v=S59Z6Q6Z8IE>



Staying with the theme of steam power, Ray Fontaine showed us his burner and firebox to be run on propane. He also showed us a brass lid for the smoke box and a fire box door. The scale for his Shay locomotive is the familiar one and half inch. In order to machine the lengthy piece, he bought a right angle attachment for his Bridgeport-clone mill allowing him to perform the machining on the horizontal bed.

Mike Rehmus showed us his connecting rod for the GEM engine. BAEM members are fine-tuning the compression ratio of this fine engine.



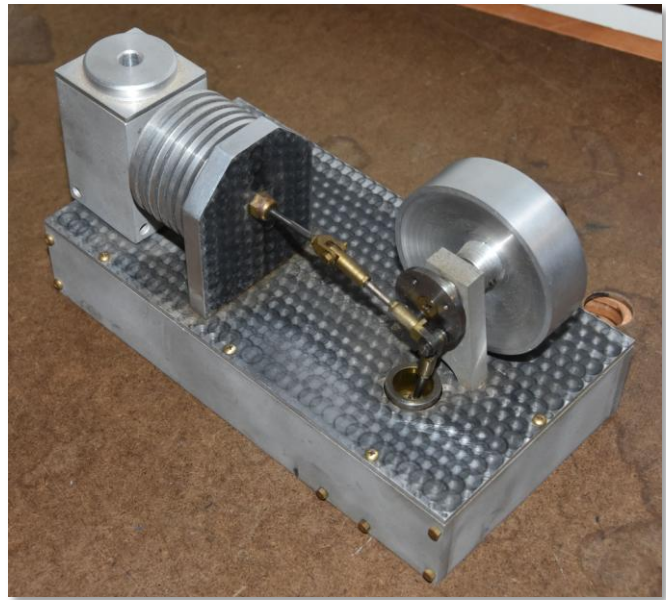
Under the category of mistakes to avoid, we heard of three mishaps. The first was caused by not allowing a power draw bar chucking device sufficient time to firmly clamp the cutting tool. Another error was caused by a drill-mill head turning under the stress of a deep cut. The last is a broken Bridgeport main casting caused by a fall when a rope broke during transport. Hire a professional and save money.

Mike Byrne is interested in re-purposing inexpensive devices made in China to fit our miniature engine ignition needs. While surfing for such devices, he came across kits for fitting gas-powered engines to bicycles.



The ignition system for these engines interested him and he learned that they are available for very little money. They employ a magnet rotor connected to the flywheel. He thinks it takes the 20 volt alternating signal generated, rectifies it, steps it up, and runs it through a potted thyristor. A capacitor actuates the discharge. Mike may use one of these systems with a GEM build that he is building currently.

Pat O'Connor's neighbor uses a surplus Army hand cranked voltage generator and a probe to drive worms out of his lawn. Hmmm, going fishing? Lawns need worms, leave 'em alone, I say.



Aaron Keller was the recipient of a Sterling engine that needed some serious attention. Aaron also gave us an update on the Webster group engine build. There have been member workshops that have required updating, carburetors are out of stock from the vendor, and workplace necessities have all conspired to delay, but not defeat the build. Other involved machinists are Wes Wagnon and Steve Hazelton.

Lastly, the secretary gave the group an update on the situation with the Fire Marshal and his proscription of engine running inside the building during the WEME Show. Many suggestions were made by members. The suggestions were forwarded to the Marshal. He has not forwarded his final decision to us at the time of this reporting.

The meeting was adjourned at 11:26 am.