

The Crank Calls



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MEMBERSHIP \$25.00 US

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NEXT MEETING

**Saturday, March 18, 2023, at the
Golden Gate Live Steamers clubhouse site in
Tilden Park, Orinda, CA**

Gate opens at 9:00 am
Meeting starts at 10:00 am

Upcoming Events

- Mar 18: BAEM meeting at GGLS
- Apr 15: BAEM meeting at GGLS
- Apr 22: STEAM Discovery Festival
- May 20: BAEM meeting at GGLS

See below for more details regarding events. Watch Crank Calls, BAEM emails and BAEM web page for updates. BAEM meetings are usually 3rd Saturday of the month except December.

MEETING NOTES

Bay Area Engine Modelers met at Golden Gate Live Steamers on February 18, 2003.

Twenty-five members were present. President Paul Denham welcomed attendees.

NEW MEMBERS/VISITORS

BAEM members are reminded that visitors are welcome at our club meetings, and we're always looking for new members.

TREASURER'S REPORT

President Paul Denham reported the club remains solvent.

The 2023 club dues of \$25 dollars are due, and checks can be mailed to Deirdre Denham at 1937 Merchant St, Crockett, CA 94525. Make checks payable to "BAEM".

CLUB BADGES

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

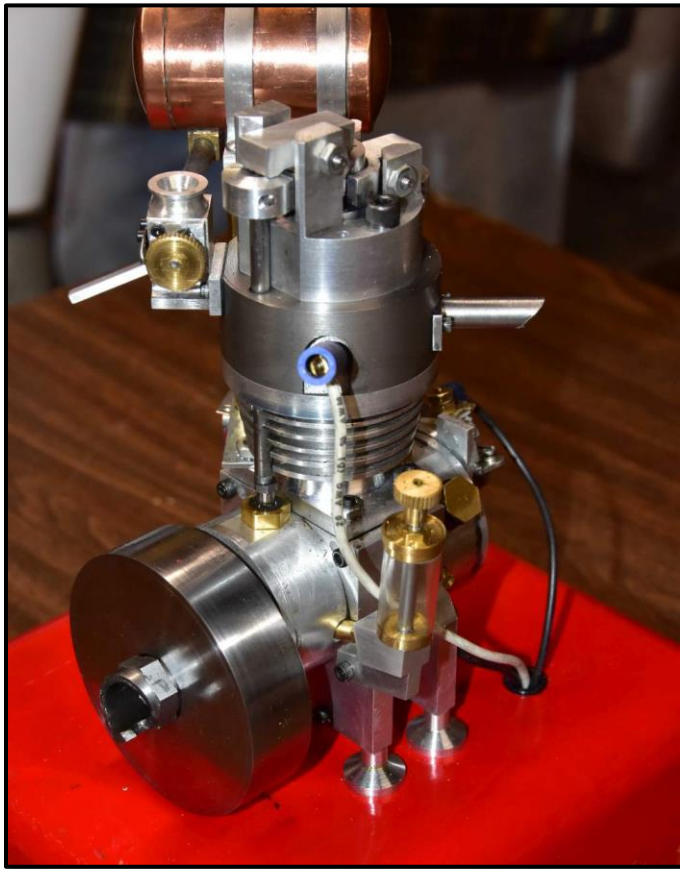
UPCOMING SHOWS AND EVENTS

April 22 is the STEAM Discovery Festival from 10am to 4pm at the Solano Community College, 4000 Suisun Valley Road, Fairfield. STEAM stands for Science, Technology, Education, Arts, Mathematics. It is a makers type event. Website is: <http://steamdiscoveryfestival.com>

Steve Hazelton (steve.hzltn@gmail.com) is coordinating our exhibit.

FIRST POPS

Joel Cohen ran his newly completed single cylinder vertical 4-stroke engine with unique concentric intake/exhaust valves. Bore is 1 inch, stroke 1.25 inches and compression ratio roughly 13:1. Engine is Joel's own design and build, mounted on his signature bright red base. Joel reported this engine was "version 2" after rework to resolve some valve dimensional issues.



Joel's concentric valve engine



Joel starting his engine.

BITS AND PIECES

Quorn

The Quorn Universal Tool & Cutter Grinder is a complex grinding/tool sharpening device that can be used to sharpen just about anything and create new cutting tools as well. In 1974, Professor D. H. Chaddock saw a need for an inexpensive tool cutter grinder for the home hobby machinist. His design was published in Model Engineering magazine, in a series of build articles.



Dwight's Quorn

Dwight Giles acquired a Quorn cutter grinder casting set in the early 1980s and started what became a 2-year build project. Dwight added a multi speed spindle with a belt drive and found a suitable electric motor.

Dwight's was a Mark II machine. He has forgotten the castings source. Castings are currently available from Martin Models.

(<https://www.martinmodel.com/collections/quorn-casting-sets>)

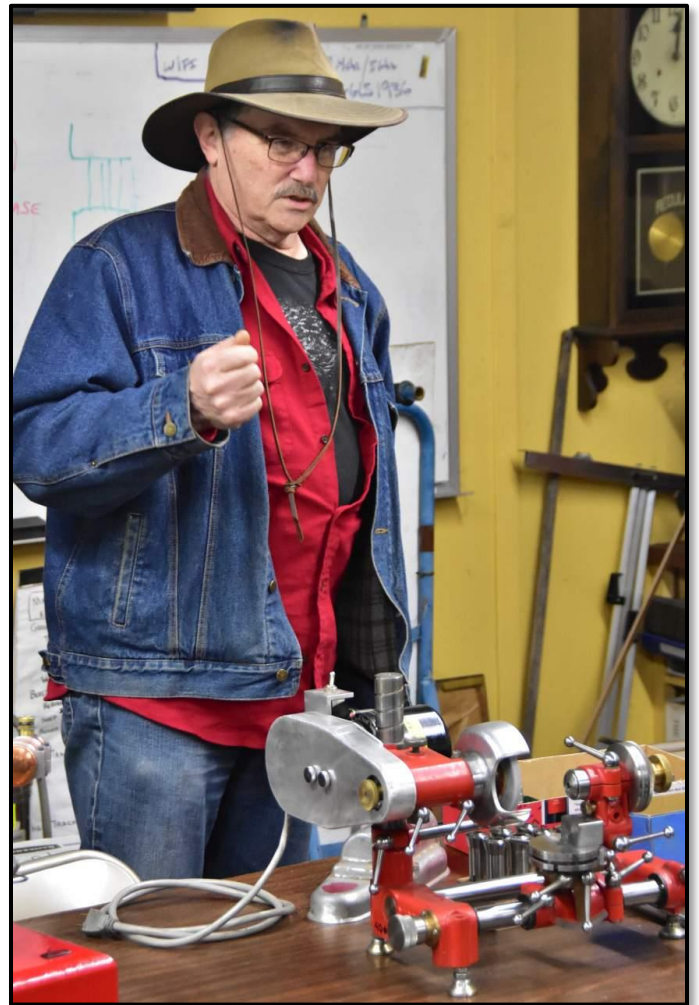


Dwight describes his build experience.

Dwight also shared some of his history including purchase of a Craftsman 12-inch lathe for \$550 that he used to machine the Quorn. He made several ball cutters to machine the Quorn locking arms. Other lathe applications were model airplane parts and his 10-year home built airplane project: Wag-A-Bond Traveler.

New Home

Charlie Reiter realized that he didn't have enough tool grinder capability in his shop, and he acquired Dwight's Quorn. He brought the machine with attachments, grinding wheels, collet set, and a new aluminum belt guard to the meeting for "show and tell". He described some of the features and applications of the Quorn. Of interest was the heavy belt guard casting that Dwight had elected not to use. Charlie agreed and created his own guard of welded aluminum.



Charlie describes using the Quorn.

Charlie also showed an interesting center punch he found on eBay. After tip sharpening, Charlie finds the tool achieves better punch location accuracy.

Diesel Vertical

Peter Lawrence has been working on a reverse-engineered version of a single cylinder A-frame vertical diesel based on Hansen's YouTube posting. He is currently working on two versions: a diesel and a prototype ignition version for risk reduction. This month, he brought in flywheels for each. He described some of the challenges in fixturing and silver soldering the spokes. One task is to resolve cracked joints in the diesel flywheel.



Peter discusses flywheel spoke cracked joints.

Peter also brought in the unfinished water pump for his Duesenberg project, which required a creative rotary table setup to machine the scroll profile.



Duesenberg water pump.

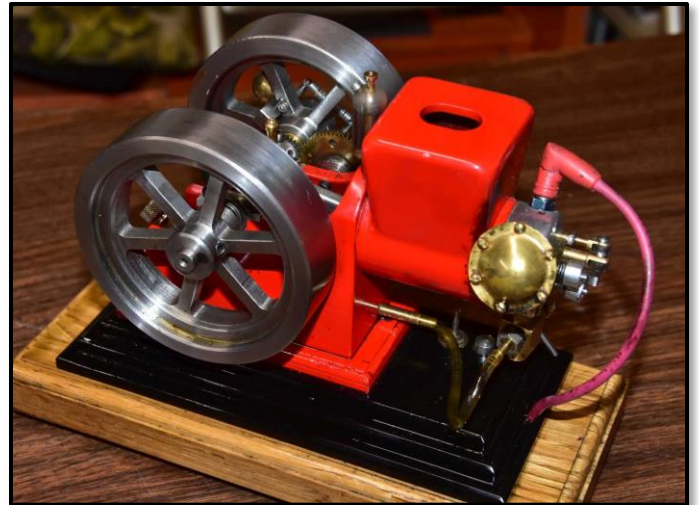
GEM V Progress

Paul Denham built a GEM1 from Dwight Giles' handwritten notes and added a very elegant hit-and-miss governor. More recently, Dwight designed and partially built a vertical version of the GEM1, which Mike Rehmus intends to include in future issues of Model Engine Builder as a construction article. Dwight offered Paul a partially complete engine (base, cylinder, piston, fly wheels, and head). Paul added carburetor, ignition, fuel tank, hit and miss governor, and Corian base. Dwight was so impressed he added a beautiful finger joint mounting box to compliment the base. Mike Rehmus had been calling the new engine Gemini but since Paul engraved a plaque with GEM V and date, that must be the new name.



GEM V

Paul ran both the GEM1 and the GEM V but reported that the hit and miss needed tuning for the GEM V. He speculated the GEM1 used an “O”-ring, while the GEM V used two cast iron rings, so the GEM V may require a longer break in.



GEM 1

Paul also described his methods for machining carburetor spray bars and needle valves. Needle valves are sometimes made from 2-56 screws with a ground tapered point. Machining a longer taper to provide less valve setting sensitivity could be a challenge. Paul discovered that “T” pins used for model airplane construction had an appropriate taper. He also found that very small drill bits designed for circuit boards achieved the hole dimensions he needed.

Black Widow Castings

V8 Black Widow Engine castings made from Dwight's patterns are now available from Martin Models.
(<https://www.martinmodel.com/collections/model-engine-casting-sets/products/v8-black-widow-engine>)

Black Widow is a Dwight Giles/Ken Hurst design and Martin obtained Dwight's mold patterns. An inspection of the Martin castings suggests there are still a few parts to be made from bar stock.



A nicely finished V8 Black Widow



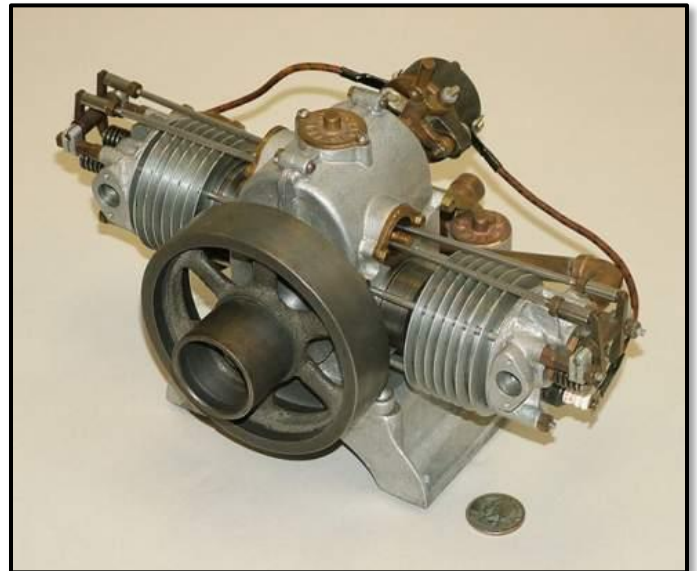
V8 Black Widow casting kit from Martin Models

RAMBLINGS

Working on an interesting project? Got a great BAEM story? Share it with us here. Send us pics and project details, and your hard work will be shared with the entire club.

FOR SALE

WALL Wizard casting kit for sale



A fully assembled Wall Wizard

BAEM member Pat O'Connor has a very rare Wall Wizard engine casting kit he wants to sell. Comes with original set of Blueprints plus other items. It is probably over 70 years old! The flywheel has been about 90% machined, and the Block has had some nice cuts on it. (Here's some background information about model engine designer Elmer Wall:

<http://modelengineneers.org/gallery/p18.html>)

Pat would prefer to sell it to a BAEM member, and is willing to sell it for \$250.00, which is a bargain price for something this rare. Dick Pretel is handling this sale, so contact him if you're interested.

Dick: 408 732 6507, email: rpm11k@att.net

Got something you'd like to sell? Your ad is free and will be seen by likely customers.

NEWSLETTER CONTRIBUTIONS

Your contributions to this newsletter are appreciated: workshop reports, tech articles, reviews, historical pieces, whatever. You contribute, we'll figure out how to post it. Send your contributions to either or both of us. Thanks!

-Mike Byrne at mgybyrne3@comcast.net

-Wes Wagon at weswag@ix.netcom.cm