

The Crank Calls



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MEMBERSHIP \$25.00 US
Contact Paul Denham at
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NEXT MEETING
Saturday, March 19, 2022, 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
Meeting will be inside, without masks.
Hot wood stove if needed!

Upcoming Events

- Mar 19: BAEM meeting at GGLS
- Apr 16: BAEM meeting at GGLS
- May 21: 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
The monthly Bay Area Engine Modelers meeting was held at the Golden Gate Live Steamers site on February 19, 1022. Twenty members and one guest were present.

someday. We hope to see more of Janai at future meetings.
BAEM members are reminded that visitors are welcome at our club meetings, and we're always looking for new members.

NEW MEMBERS/VISITORS
We were pleased to welcome guest Janai. Janai is an 11-year-old fifth-grader who has been hanging out at his grandfather's shop. Hasn't yet had any hands-on machine operation experience, but is looking forward to it,

TREASURER'S REPORT
BAEM president reported that club remains financially solvent and that 2022 dues of \$25 are due. Give your check to Paul Denham at the next club meeting, or mail 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 Rehms (mrehms@byvideo.com) who has offered to produce them.

UPCOMING SHOWS/EVENTS:

None in the near future.

FIRST POPS

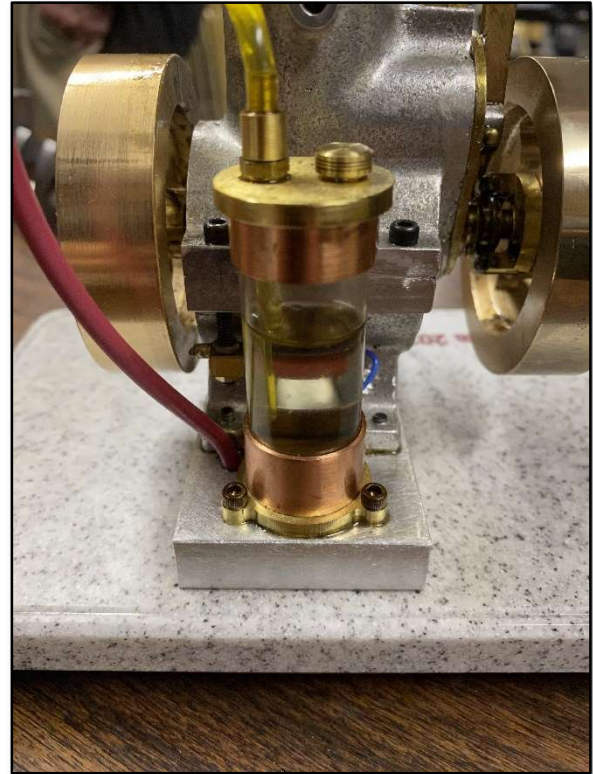
Paul Denham ran his recently completed "Little Devil." It is a Bob Shore designed vertical hit-and-miss engine. Ken Hurst and Dwight Giles acquired castings and prepared "kits". Paul got his castings from Dwight.



Paul Denham's completed Little Devil

The base is a fine example of Paul's craftsmanship. It is made from Dupont Corian, (<https://en.wikipedia.org/wiki/Corian>) the attractive and tough polymer countertop material whose sale is restricted to certified vendors. Note the rounded corners and carefully routed decorative groove all around the top edge. Short stubby "feet" lift the base off the countertop, giving it an airy feel and providing some

additional space for the ignition parts that are cleverly hidden from view on the bottom side. The red spark plug wire simply descends straight down through the aluminum block mounting plate. A peek underneath reveals a hollowed-out region that nests the hefty spark coil, completely hiding it.



Backside view of Paul's Little Devil

The backside view reveals an attractive and practical fuel tank made from a clear glass test tube nestled into short sections of copper pipe that are soldered to brass fittings. The glass tube is held in place with Loctite.

Lapping the valves to create an adequate gas seal is critical to obtaining adequate compression. Paul followed Dwight's advice and used a 1/16" thickness slitting saw to create a shallow groove on the combustion face of the valve head. This permitted use of a flat-blade screwdriver to rotate the valve while applying pressure on the valve seat face. Clover lapping compound was used, and a gas-tight seal was obtained.

Paul's final touch was a signing and dating of his work, by means of a CNC-routed engraved lettering filled with contrasting red paint. Nicely done!

Steve Ridgway ran his GEM hit-and-miss, our second "first pop" of the day. GEM was designed by Dwight Giles. Mike Rehmus drew up plans and published build articles in Model Engine Builder. Engine was very nice looking and ran well. Ignition was Paul Denham's version of the Sage-Getty circuit with automobile "coil over plug" and reed switch.



Fine workmanship by Steve Ridgway



Steve Ridgway's GEM

BITS AND PIECES

Charlie Reiter has started a model McLaughlin Fire Wagon. He showed two of the four wheels with wooden spokes and an aluminum ring. He also had the connecting rod assembly and machined cam components and a crankshaft. Charlie also described making split bearings from a salvage piece of cracked bronze stock.



A full-sized McLaughlin Fire Wagon

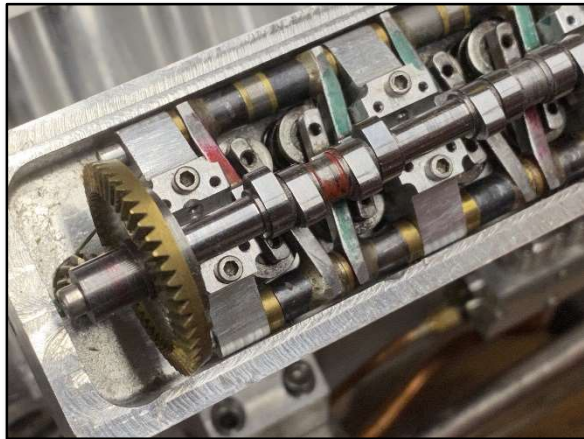


Paul Denham kindly CNC engraved this brass plaque for Steve's GEM



Wood-spoked wheels for model

Peter Lawrence brought in his Merlin and discussed his efforts to resolve dimensioning and machining issues with his camshafts. Peter used his shop made cam grinder to adjust heat treatment induced discrepancies.



Merlin camshaft with bevel gear drive

The Merlin overhead camshaft is driven by a vertical shaft with a bevel gear that meshes with the bevel gear attached to the camshaft.

Each camshaft operates four valves in each of six cylinders in this V12, so there's a lot of mechanical resistance. The brass gear was slipping on the shaft. A variety of potential solutions were discussed, and Peter is working on overcoming these challenges. Stay tuned.

As a diversion from Merlin frustrations, Peter started a Muncaster twin cylinder steam engine and had rods and crank shaft completed.

Dwight Giles brought in one of his tapered connecting rod milling fixtures. It is adjustable in rod length and taper and simplifies cutting tapers on a manual mill with a single setup. Fixture design was included in Model Engine Builder No 38.

Dwight also brought in an expensive, but very effective Omegadrill tool set for extracting broken taps.

<https://www.travers.com/product/omegadrill-od-set1-tap-extractor-15-937-004>

He described a job to make 10 large nuts for a Yak airplane and how using the tool saved #10 after breaking an 8-24 tap.

Jerry Franklin is also building a Little Devil and showed single point cutter design he was using to cut carburetor parts. He also described problems with broken bits while drilling small diameter holes in brass. Jerry suspected work hardening. Others suggested sharp bits and peck drilling would help drilling. Jerry also mentioned supply sources in San Jose: Metal Supermarket for metals and Valley Tool Supply for tools and drill bits.

Mike Byrne recently acquired a non-running Sieg KX1 CNC mini mill bundled with Mach3 from Little Machine Shop. He gave in impromptu "tech topic" discussion about his trouble shooting efforts to get the spindle motor speed control working and to resolve stepper direction problems that were found to be related to failures on the parallel interface board.



(L to R) Paul Denham, Steve Ridgway,
Steve Hazelton and Janai

RAMBLINGS

Anyone interested in participating in a weekly Zoom meeting to discuss learning to use Alibre Atom 3D? E-me if you'd like to explore the idea: weswag@ix.netcom.com

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.

WANTED

BAEM member Larry Bunch wants to purchase a Logan 11 x 36 Lathe and asks that anyone who knows of one for sale please contact him.

Larry Bunch 209-404-6700
wendyroky2@gmail.com

FOR SALE

Lathe for sale.

Grizzly g0602 10x22 lathe
<https://www.grizzly.com/products/grizzly-10-x-22-benchtopy-metal-lathe/g0602>, new, never used. Price and tooling negotiable.

Contact Bill Weber
Email: billweber3@comcast.net
Phone: (925) 577-3142

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Mike Rehmus has a large, heavy welding table he would like place in a new home. Mike estimates the table is 350 pounds including the quarter inch steel top. If you're interested in it, contact Mike at mrehmus@byvideo.com.

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Mike also has a "nearly new" Qidi S-box LCD resin printer for \$400. Apparently, he doesn't need two. He also has some extra Frisco Standard bearing block mold plugs for less than production costs.

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Dick Pretel has a number of model engine connecting rods available for sale. Large rods are 2-1/2 inches center to center; small rods are 1-15/16 inches center to center. Big end bores are 7/16 inches on both. Wrist pins are included (O1 tool steel, hardened to Rockwell C60, 0.1875" ground to +.0002, -.0000, centers on both ends.) Price is \$12 per rod. Contact Dick via email (rpm11K@att.net) with questions or orders. Drawings at <http://www.damgood.com/product-model.html>

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Jerry Franklin has a Taiwan Bridgeport clone for sale. It's a 1980 EXACTO model 942b milling machine with 9x42" table, 220/440 3 phase power. Better than average condition. Located in Milpitas. \$2200. Leave contact info at 408 263 8577 (voicemail) and Jerry will get in touch with you.

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BAEM member George Spain is offering for sale three different professional-level cylinder boring devices. All are used, but in good condition.

VAN NORMAN 777-6 Boring Bar.
Boring bar with stand and tool kit.
Price: \$ 1500

VAN NORMAN 944 Boring Bar.

Boring bar with stand and tools.
Seen elsewhere for \$ 2,200 – 4,800.
Price: \$ 1500

STRONG Boring Bar.

Boring bar, table model, with tools.
Bores 40mm to 70mm.
Seen elsewhere for \$ 1,600 – 2,750.
Price: \$ 1500

For further information, contact George Spain at
Phone: 707-342-2931
Email: geobev11@att.net

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Dwight Giles has a vintage motor he is offering:
-1.5 hp electric motor. 1750 rpm. 110/220v
AC single phase. Heavy! Price: Free!
Contact Dwight at jig313@aol.com
or phone: 707-648-1481

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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 mgbyrne3@comcast.net
-Wes Wagnon at weswag@ix.netcom.com



LAST WORD

As posted to Home Model Engine Machinist forum and forwarded by Mike Rehmus. . . .

Where is my tool?

