

# The Crank Calls



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**MEMBERSHIP \$25.00 US**  
Contact Paul Denham at  
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**NEXT MEETING**  
**Saturday, June 19, 2021 at the**  
**Golden Gate Live Steamers clubhouse in**  
**Tilden Park, Orinda, CA**  
Gate opens at 9:00 am  
Meeting starts at 10:00 am

**Upcoming Events**

BAEM meetings are usually 3rd Saturday of the month except December. Upcoming meetings:

- June 19, 2021 at GGLS
- July 17, 2021 at GGLS
- Aug 21, 2021 at GGLS

Watch Crank Calls, BAEM emails and BAEM web page for updates.

### MEETING NOTES

May 15, 2021  
The BAEM May meeting was held at Golden Gate Live Steamers while observing relaxed social distancing. Eighteen members were in attendance.  
Club president Paul Denham noted the recent passing of BAEM members Glenn Christofferson and Tom Armstrong. Carl Wilson made items from Tom's shop available to club members (magazines, machine screw assortments, and material).  
No response yet received from Good Guys regarding outside engine showing at the fall show in Pleasanton.

### 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

The 2021 dues of \$25 have been due since the beginning of the year. Pay now if you haven't already. Give your check to Paul Denham. Dues can also be mailed to Deirdre Denham at 1937 Merchant St, Crockett, CA 94525. Make checks payable to "BAEM".  
The BAEM club is solvent.

## CLUB BADGES

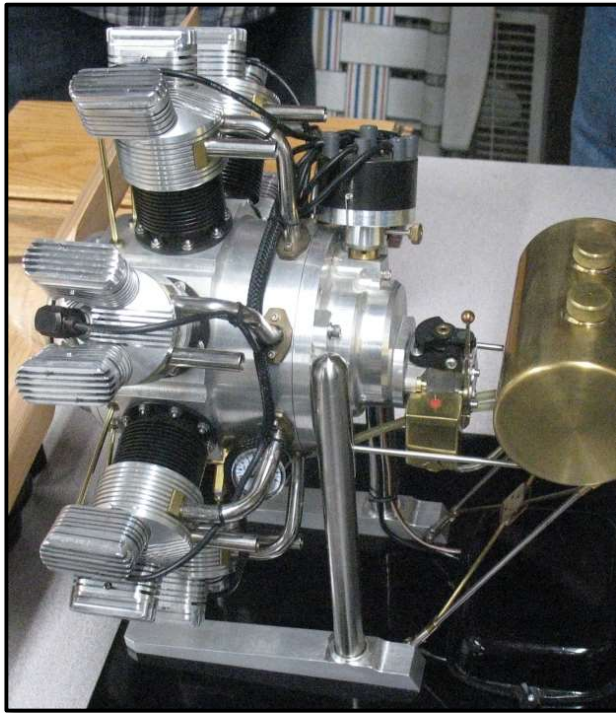
If you are a member in need a badge, contact Mike Rehms (mrehms@byvideo.com) who has offered to produce them.

## FIRST POPS

Bob Hettinger brought his 7-cylinder version of the Hodgson radial engine (see <https://agelessengines.com>). Engine machining was completed some time ago and Bob recently was able to get a short run. He suspects carburation tuning issues.



*Bob Hettinger's Hodgson radial.*



*Nice work, Bob!*

## BITS AND PIECES

Paul Denham showed progress on his Red Devil engine. He had the skew gear cam drive, head, and connecting rod in place, and he successfully machined the exhaust and intake valve ports. He described encountering some CNC issues with the intake port, but these were resolved.



*Progress on the Red Devil*



Peter Lawrence continues to progress on his 4-cylinder Duesenberg (crankshaft) and 4-cylinder Cirrus aircraft engine (4130 crankshaft blank). He shared his shop made tooling for cutting and corner rounding cooling fins and for turning crankshafts.



*Cooling fins on the Cirrus*



*Chrome-moly crank. Nice.*

Dwight Giles brought in a mostly machined 30 cc Wall with numerous refinements. He also described his technique to install 1 mm “O” rings to seal exposed pushrods and avoid cam lifter oil leaks.



*Dwight's latest project*

Bob Kradjian showed his very impressive Westbury 30 cc Sea Lion. This is an in-line 4 with overhead cams, mounted on a beautiful display box. This engine runs exceptionally well, as demonstrated on the patio after the meeting.



*Dr. Bob's Sea Lion*

Ken Brunskill brought a very nice box built by former BAEM member Rick Levesque. The box is made with what appears to be walnut and oak with finger joints. Ken plans to mount a soon to be completed Parcell and Weed hit and miss engine.



*Levesque fine woodworking*



## RAMBLINGS

A couple newsletters ago, we discussed wobblers: relatively simple steam engines that are typically run via compressed air. The single-cylinder ones are often recommended as beginner machining projects.

BAEM member Jim Piazza recently completed a much more complex and challenging wobbler project: a four-cylinder model in a “V” configuration. Designed by Elmer Verburg, it is chapter 27 in Verburg’s book, *Elmer’s Engines*. This book is now out of print, but a free .pdf of the entire book can be downloaded here:

<http://www.myheap.com/metalworking/resources-downloads.html> If you just want the plans for the V4, they can be downloaded here: [www.john-tom.com/ElmersEngines/27\\_V4wobbler.pdf](http://www.john-tom.com/ElmersEngines/27_V4wobbler.pdf)



*V4 Wobbler by Jim Piazza*

According to Jim, this project requires very precise cross-drilling of the numerous airway passages. Jim recommends starting with a stub drill, then moving to use of a longer drill. New or newly sharpened, high-quality drills are essential.

Some of the airway passages are drilled thru, then plugged in the end. The plans suggest plugging with 1/16” material and sealing with Loctite. Jim suggests avoiding this use of Loctite, as it is difficult to control where it goes, and can result in troublesome clogging of the airway passages. Instead, Jim used 1/16” rivets to block the end of the hole. Using the chuck end of a drill bit as a bucking bar, he swaged the rivet against the drill bit shaft, expanding the rivet to fill and seal the hole. He then machined off the rivet head, leaving the shaft a few thou proud, then sanding it flat and completely flush.

Jim made other improvements. He used brass tubing as cylinder liners. The crankshaft turns on ball bearings, rather than the bronze bushing called for in the plans. A critical element is the cylinder pivot, which he made of steel. He added a flywheel (not shown in photo) to smooth out the rotation. Finally, a nice matte finish was obtained by several hours in a vibratory media tumbler.

At 10 PSI, it runs at 490 RPM.

Nice work, Jim!

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

## FOR SALE

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

### 1. VAN NORMAN 777-6 Boring Bar.

Boring bar with stand and tool kit.

Price: \$ 1500

### 2. VAN NORMAN 944 Boring Bar.

Boring bar with stand and tools.

Seen elsewhere for \$ 2,200 – 4,800.

Price: \$ 1500

### 5. 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

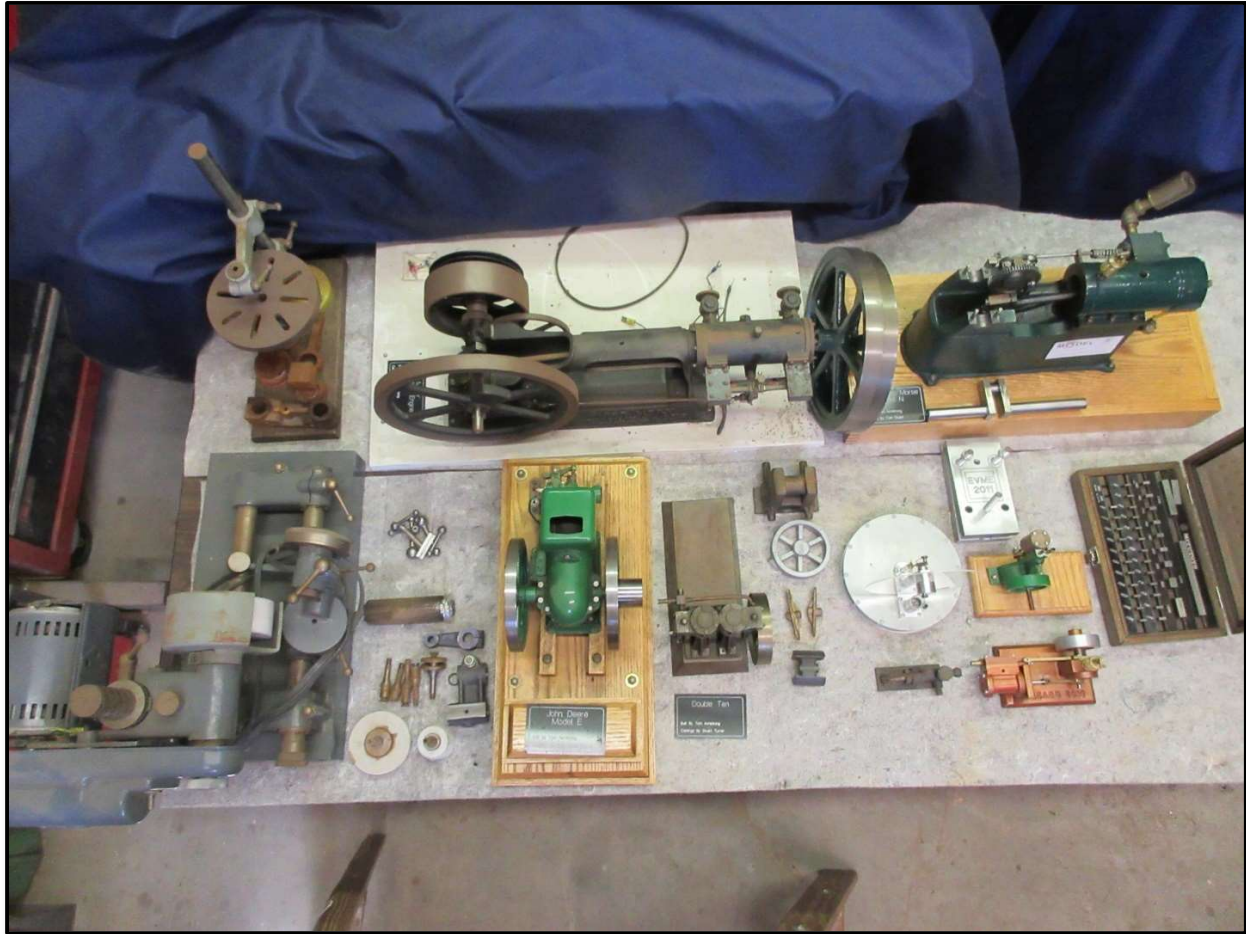
Phone: 707-342-2931

Email: [geobev11@att.net](mailto:geobev11@att.net)

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BAEM member Carl Wilson is helping distribute the engine models of Tom Armstrong. They are listed below and pictured here, starting in the back row, from left to right:



*Items pictured are listed below.*

- A **George Thomas pillar tool** including the castings to make a small drill press. \$75
- Mery Explosive Vapor Engine** – machining complete but not running - \$500
- Fairbanks Model N** – disassembled, governor and igniter parts missing - \$350
- Quorn Tool & Cutter Grinder** – complete but some surface rust - \$500
- John Deere Model E** – complete and has been running - \$750
- Stuart Double 10 steam engine** \$250
- Unknown dynamo casting set.** Make offer.
- Stuart boiler feed hand pump** \$10 (brown in front of alum round)
- Senft low temperature differential Stirling engine** \$25
- GEARS 2010 double acting engine** \$50 (copper color)
- PM Research Wobbler** \$50 (Green)
- Short piece clamp** for cutoff bandsaw \$25 (Alum rectangular block)
- Set of Mitotoyu gage blocks**, both 0.1000” wear blocks missing \$50

Contact Carl Wilson for additional details. Better photos will be available upon request. Local pickup would be appreciated but shipping is possible.

Carl Wilson

Phone: 650-967-7715 Email: [toolcarl@comcast.net](mailto:toolcarl@comcast.net)

Dwight Giles has some stuff he is offering:

**-1.5 hp electric motor.** 1750 rpm. 110/220v AC single phase. Heavy! Price: Free!

**-Engine Mount Box.** Beautiful wooden box for mounting your larger engine. Perfect for a Black Widow V8. 3 available. Price is \$200 donation to club.

Contact Dwight at [jig313@aol.com](mailto:jig313@aol.com)  
or phone: 707-648-1481

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Paul Denham mentioned that he had received an e-mail from someone saying he had a Unimat 3 available. If interested, ask Paul for contact details.

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Paul Denham also reports that Al Aldrich has given the club a brand new( import) D1-4, 8" 4 jaw chuck. Make a suitable donation to the club and its yours. Paul will bring it to the upcoming meeting.

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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](mailto:mgbyrne3@comcast.net)

-Wes Wagnon at [weswag@ix.netcom.com](mailto:weswag@ix.netcom.com)



