

## The Crank Calls



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### MEMBERSHIP \$25.00 US

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### **NEXT MEETING**

**September 8, 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

- **September 8, 2018 @ GGLS, Tilden Park**  
(This month's meeting is on the 2nd Saturday due to venue availability)

### MEETING PLACE FOR SEPTEMBER 8th

**PLEASE NOTE: Due to unavailability of our usual meeting places for the third Saturday of September, we will meet one week earlier than our usual time. The meeting will be on September 8 at the Golden Gate Live Steamer meeting room.**

### MEETING NOTES

August 18, 2018

Bob Kradjian, Secretary



President Paul Denham called the meeting to order at 10:00 am at the Golden Gate Live Steamers

facility in the beautiful Berkeley Hills. Since it was a glorious morning, we broke precedent and met outside the meeting room at the picnic tables.

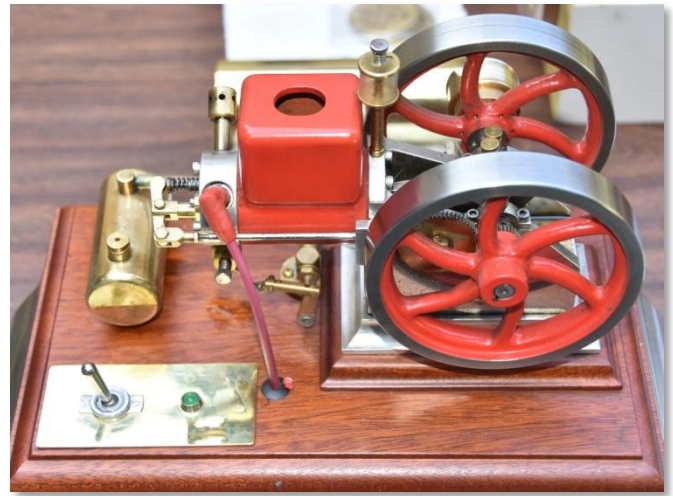
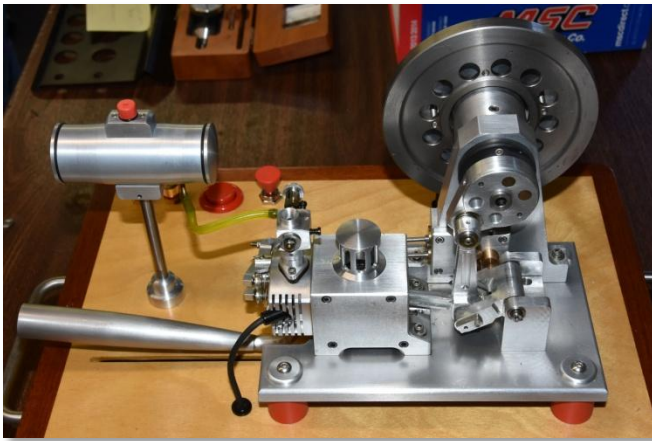
**VISITORS:** Chuck Klor visits us from Roseville. He has actually been a member for quite a while but was never able to attend a meeting due to the distance.

Carl Rice also from Napa is a new member.

Allen Atristain from Concord. He is a friend of Aaron Keller who has already completed an engine in his home machine shop.

Steve Hazelton also brought two visitors, welcome to all!

**FIRST POPS:** The Atkinson cycle engine featured in last month's newsletter has now been returned in running condition. Paul Denham tells us the story. It was built in a different pattern than the usual Atkinson engine practice. In this model, Frank Kurz used a one-to-one timing belt that actuates three gears. Those gears drive two camshafts operating the horizontal push rods. To adjust the cams, it was necessary to dismantle the covers, and remove the piston and connecting rod. Despite this, Paul re-timed the engine and it runs perfectly. This was displayed at the end of the meeting.



John Gilmore's GEM1 engine was started after some years of non-use. The gas tank was filled with a gelatinous green "gunk" that required meticulous cleaning.

To be included in this month's overflowing list of "First Pops" is an engine kindly donated to the club by Ken Kelso of Modesto. It is an Allman hit and miss engine built from a DeBolt casting set. It is a one third-scale of a real engine. Member Tim Horn made a journey to Ken's house to receive the engine and to thank Ken. Tim replaced the battery, some wiring, and a shim for the big end of the connecting rod. The quad rings for the piston were worn but still had enough compression to run. To see Tim's work, go to:

<https://www.youtube.com/watch?v=TMi6RCTv2J4>

But it is simpler to type in: "Allman model engine revived and running". Great job, Tim; and thanks to Ken.

Steve Hazelton reported on the progress of the club engine build along with Wes Wagon and Aaron Keller. It's not quite ready for first pops, but the major components are finished along with the ignition system. It won't be long now!

**SWAP MEET:** A number of fine items deemed surplus by some members left with satisfied new owners.

**TREASURER'S REPORT:** Our balance is the same as last month.

**CLUB BADGES:** If you are a member in need a badge, contact Mike Rehmus

He then showed us a second "First Pops", at least after a major repair. It was the "Johnson 4-Cycle Iron Horse" discussed at our last meeting. Paul Denham machined a very complex helical gear using a four axis CNC mill. This was to replace a badly damaged and stripped out gear. The ignition points were badly pitted and required a polishing on Dwight's diamond wheel. Following the meeting it fired up nicely after a few kicks.

(mrehmus@byvideo.com) who has offered to produce them.

**EVENTS:** Steve Hazelton gave a detailed report on the last stages of preparation for the upcoming WEME Show in just six days, August 24 through 26. August 23, Thursday, is for set up. For members not bringing engines, your help in monitoring inside tables while other members are running engines outside will be greatly appreciated.

By the time you receive this newsletter, the event will be history. We will later bring you a report.

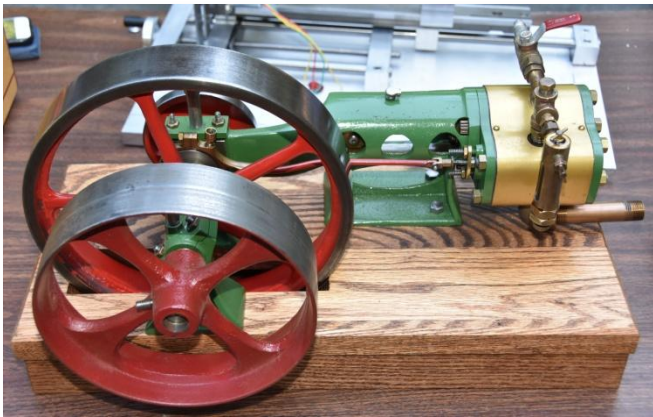
A 32-inch video display for viewing tapes and discs of engines running at other shows is planned by Mike Rehms.

Steve reminds us that we need a permanent home for the club trailer following the show.

**GGLS OPEN HOUSE:** September 23 is the date for their next open house. We have had fine experiences at previous open house events. It's a fine one-day event.

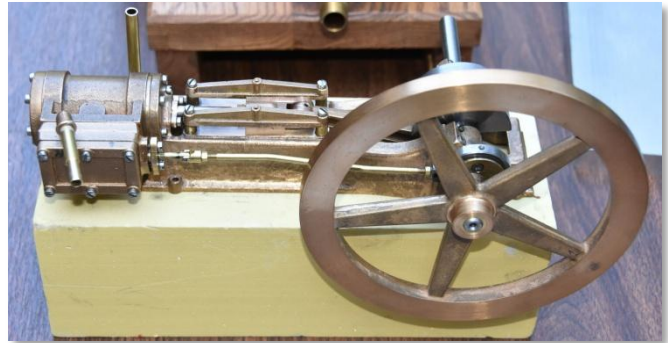
Concerning another event, Shannon Lile reminded us again of an EDGE & TA Branch 13 meeting. They will be holding a show in Galt on October 5 through 7. Our group is invited to join in. Galt is roughly a hundred miles from the Bay Area. It is about twenty miles North of Stockton, and about a two-hour drive. They have an interior barn space with overnight security. No compressor will be available. The site is the McFarland Living History Ranch. Parking and admission is free. For information: (209) 810-5913.

### **BITS AND PIECES**

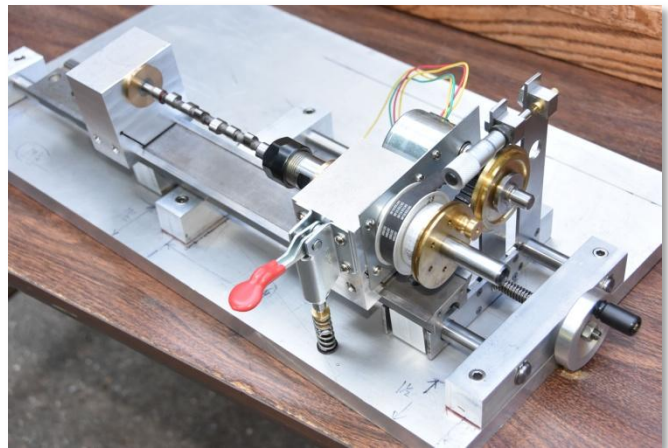


Charlie Reiter showed us an engine donated to him by the late Ron Downer. It required a goodly

amount of rebuilding. The flywheel had a spot leaded in. There were no rings on the piston and there was another leaded in spot on the piston. After a full rebuild, Charlie tells us that the engine runs well and is ready to power an apple press crusher. Now he's on to build an adequate boiler to supply steam.



Jim Piazza has finished a PM Research #1 Drill steam engine. The kit is of bronze and finished nicely by Jim. He reports that it runs beautifully and is now waiting for a "brick sheet" (also from PM research) for the base. He will also fit studs with hex nuts for the head as well as brass oil cups. He modified the eccentric, and changed to a built-up crankshaft after discarding the cast shaft blank provided in the kit.



Peter Lawrence has embarked on yet another ambitious project. This time it's a camshaft grinder inspired by Bob Hettinger's original cam grinder. It's of the rocking shaft variety with a master cam having both intake and exhaust lobes side by side. The lobes have followers that will allow either the exhaust or intake to be patterned. The grinder will be a small Dumore tool post unit. The master cam is on the same axle as the camshaft. Peter feels that

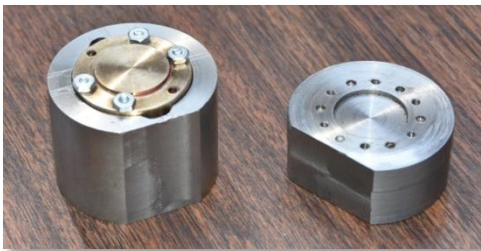
cam lobe design for our demonstration engines is not critical.

Pat O'Connor told of a method, seen on You Tube, to make a crankshaft using emergency collets. Additional holes must be bored, and several other operations. Pat, please make us an example for our next meeting.

Mike Rehmus tells us that Alibre has a two hundred dollar package for 3D operations. This should be more than adequate for our purposes. SolidWorks is more powerful, but far more expensive and difficult to learn.

For military veterans, SolidWorks will grant a one-year license for twenty dollars. No cheating allowed! You'll need to scan your DD 214 discharge document.

Fusion 360 is still free.



At our last meeting, Glenn Christoffersen raised the subject of holding small castings for delicate machining operations. The use of Wood's metal, epoxy spuds, or casting resin was discussed. He has solved the problem and showed us the result. The part in question was a small Parcell and Weed cylinder head. He showed us two fixtures and promises to bring the results and provide further details at a future meeting.



Dwight Giles gave us a master class in elegant gas tank manufacturing. Using a brass tube from an old

poster bedstead. He then made a rather complex die and used his hydraulic press to form the discs from flat sheet. There is a small radius at the circumference that forms a trough to accept silver solder. The soldering process is best done with the tank held horizontally to avoid an unsightly run of solder.

Our visitor, Allen, showed us a wobbler-type steam engine he made in his Diablo Valley College machining class.

Jerry Franklin tells us of his continuing adventures on his antique Whitcomb-Blaisdell lathe. At this meeting, he displayed a nicely machined stainless half-inch drill rod using a precision live center. He sharpened his own high-speed steel bits for that operation and was able to achieve a fine finish.

We adjourned at 11:12 am.

