

The Crank Calls



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|--------------------|-----------------|------------------------------|
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MEMBERSHIP \$25.00 US
 Contact Paul Denham at
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NEXT MEETING

**Saturday, September 19, 2020 at the
 Golden Gate Live Steamers clubhouse in
 Tilden Park, Orinda, CA**

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

Meeting will be outdoors, masks required
 Social distancing will be observed

Upcoming Events

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

- September 19, 2020 at Golden Gate Live Steamers
- October 3, 2020 at GGLS—open house
- November 21, 2020 at GGLS

MEETING NOTES

The August 15, 2020 gathering was not a formal BAEM meeting. A few folks came to GGLS and ran some engines. No pictures forwarded.

NEW MEMBERS/VISITORS

None.

TREASURER'S REPORT

The 2020 dues of \$25 are due. Dues can 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.

MEETING VENUES

Upcoming meetings will be at GGLS, due to the ability to meet outdoors, reducing the risk of Covid-19 infection. Masks must be worn. The October BAEM meeting is currently scheduled for the first Saturday, October 3, to overlap with the GGLS open house. Watch Crank Calls, BAEM emails, and BAEM web page for meeting updates.

SHOW PARTICIPATION

Nothing to report this month.

FIRST POPS

New BAEM member George Spain contacted Paul about joining the club and then shared the attached pictures. George's description: "Hi - this engine is of my own design, with a single lobe cam and roller cam followers. It is still in the rough stage but runs great. I call it the Jules Vern 2. There is still some cosmetic work to do but have all winter." Paul reports he helped with ignition and Dwight helped with the flywheel.

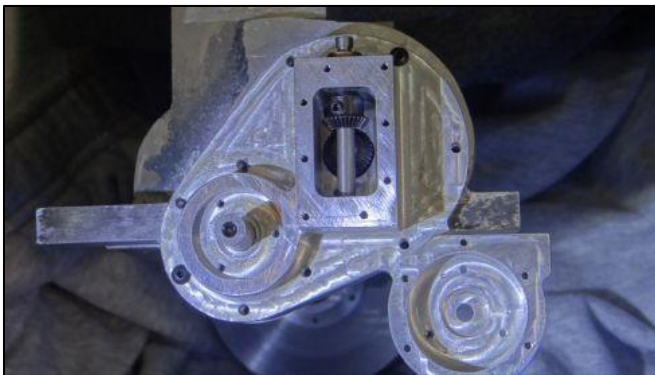
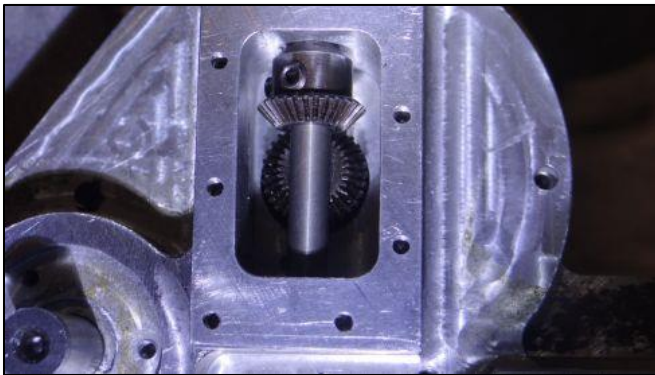
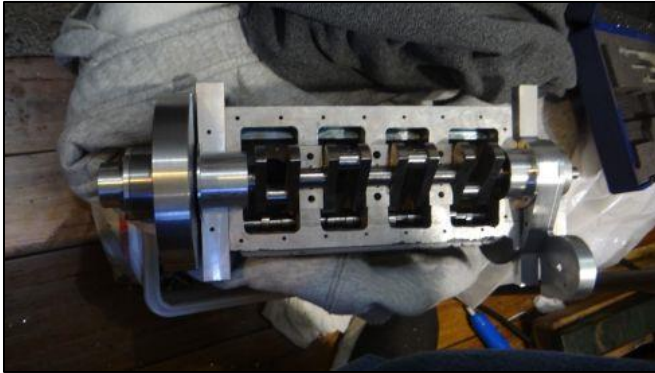


George Spain's original design single cam engine.

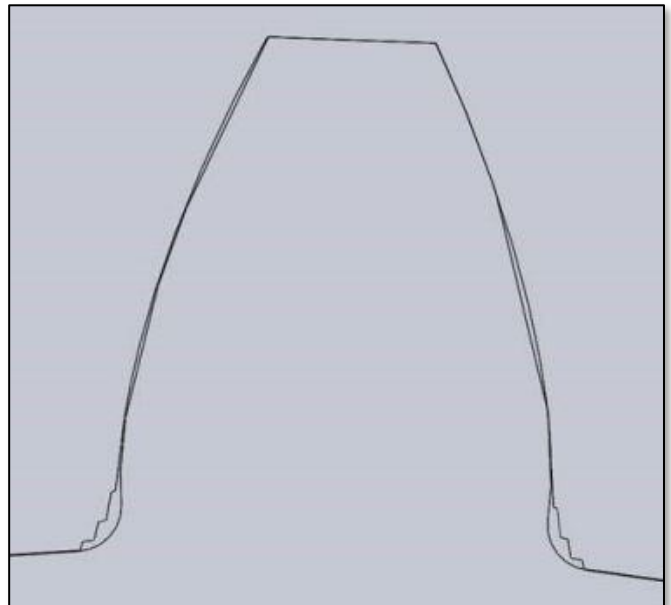
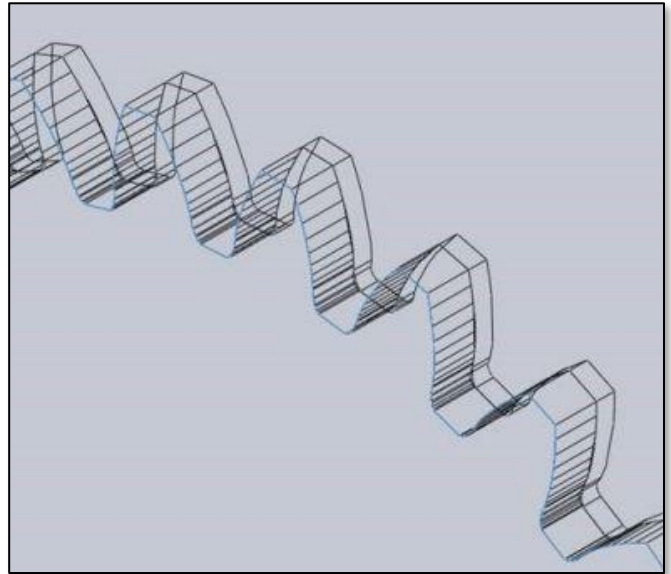


BITS AND PIECES

Paul Denham is working on a Dwight Giles "half-eight" engine. Apparently, Paul has an arrangement with Dwight: Dwight does the first 70% of the parts procurement and machining and then Paul does the remaining 85% required to get it running. Pictures show work in progress. Bevel gears reportedly sourced from a box of goodies Paul got from Bob Kradjian.

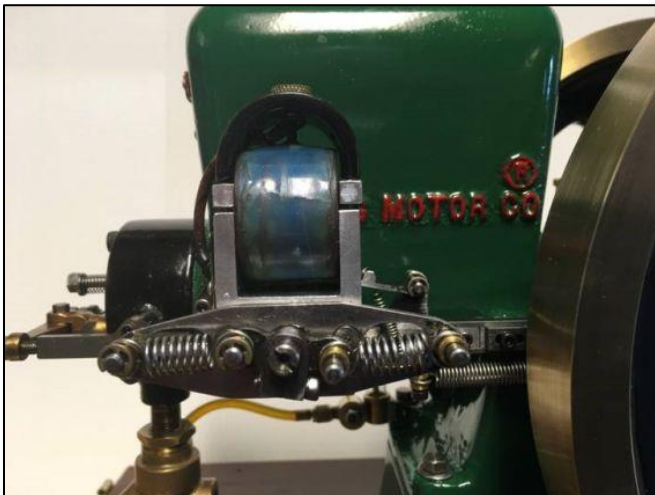


Additional note regarding the "half eight" gears: Paul had a 32DP cam gear and needed cut a 60T crank gear. He acquired a No 8 involute cutter ($\geq 135T$) and devised a CNC tool path that used this cutter as a single tooth rack hob. How a rack cutter makes an involute tooth with linear segments might be an interesting tech topic if anyone is interested. Snips below show a Solidworks rendering.



Solidworks example of rack hob cutter linear approximation of involute spur gear (mod 1, PA 20, N 30 shown with true involute) after 4 offset cutting passes.

We're a little short of material for this newsletter so I added some pictures of John Vietti's Red Wing with an oscillating magneto. It came to mind when Peter Lawrence asked for help in calculating spring stiffness needed for his Merlin valves. From John's old email: "I made the oscillating mag from scratch. It's quite small with a 5/8" rotor. The hardest part was finding appropriate springs, probably spent \$70 or so on various springs from MSC . . . Remember: magnetos are like going to the dark side, and once you get involved it's hard to disengage!" I haven't gotten any pictures from Peter, but as I recall his Merlin has 12 cylinders with 4 valves each so that will be a big MSC spring order.



*John Vietti's Red Wing with oscillating magneto
(and \$70 MSC spring investment).*

FOR SALE

BAEM member Michael Phelan is offering two casting kits at the price he paid:

FAIRBANKS MORSE ECLIPSE

Half scale. Castings, gears, drawings, and info CD. Paid \$370 for it on E-Bay in Dec. 2018 (2019 sales on E-Bay were for \$650 and \$965).

ATKINSON CYCLE ENGINE

Full scale by Joe Tochtrop. Castings, drawings, and misc. hardware. Paid \$428 for it in Dec. 2018.

(925) 376-3191 phelanfolks@comcast.net

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