

## The Crank Calls



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### **MEMBERSHIP \$25.00 US**

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### **NEXT MEETING**

**October 21, 2017 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

### **MEETING PLACE FOR October 21st**

We will meet this month (October) at the Golden Gate Live Steamers meeting room in Tilden Regional Park, Berkeley, CA.

### **MEETING NOTES**

September 16, 2017  
Bob Kradjian, Secretary

President Paul Denham called the meeting to order early at 10:00 am at the Tech Shop meeting room in Redwood City.

**VISITORS:** Tim Horn is certainly not a new member, but as it is difficult to make the long trip from his home, we are happy to see him at this meeting.

**TREASURER'S REPORT:** All is well. Our new balance reflects the costs of printing signs, advertising, compressor, and other expenses for the August WEME Show. The Good Guys team promptly paid their portion of our expenses. Sales from George Gravatt's estate resulted in \$500 to the club treasury. Thanks to Dwight Giles for arranging the sale.

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

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

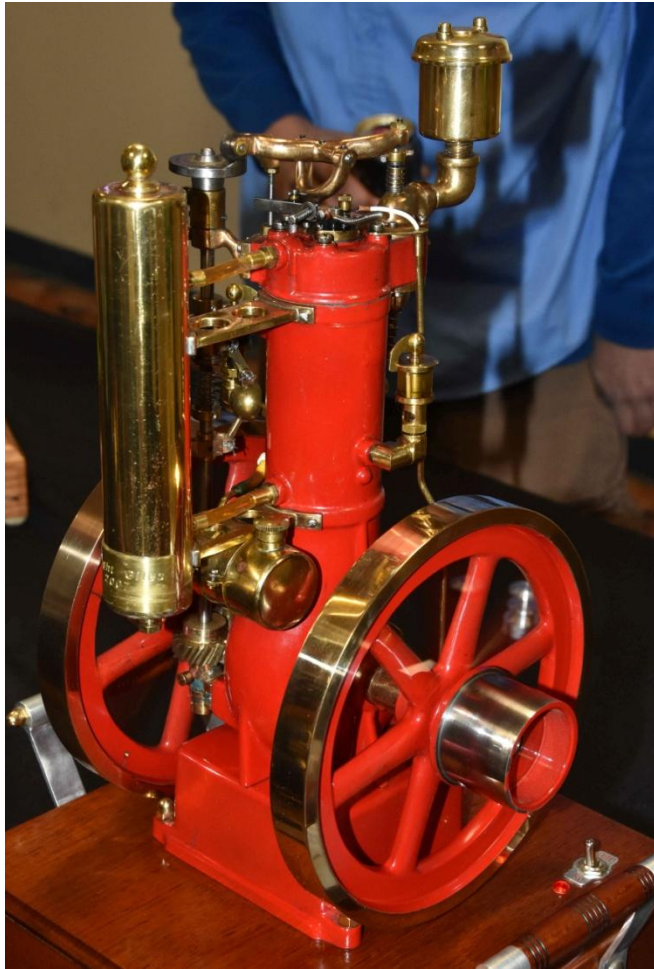
### **FIRST POPS:**

Paul Denham re-worked a Red Devil engine that had been stored on Dwight's shelf for ten years. It had minor problems relating to a dead battery and weak compression. After resolving some ignitor, problems and the compression issue it fired up beautifully. With helical gears, side shaft, spinning fly-ball governor weights, and even a wobble plate on top---it's a visual delight and runs extremely well. Dwight claims it will coast up to 18 revolutions per firing stroke.

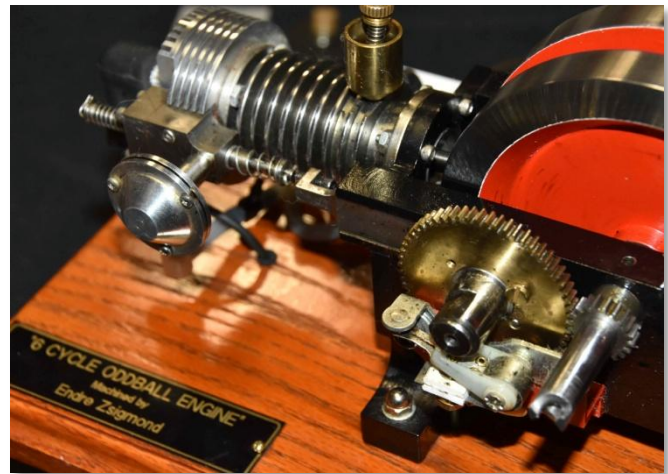
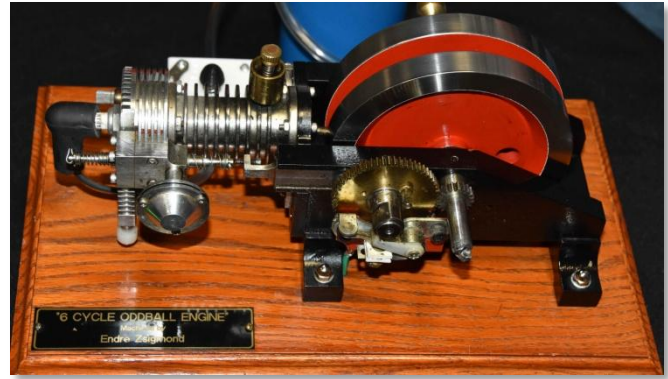
A pre-existing dent on a curved surface was neatly covered up by Paul's engraving on a curved piece of brass. This involved complex coding, but the software is available free for this application at scorchworks.com.

Castings for this engine are available from Shelf Pet Models (shelfpetmodels.com). They offer the Red Devil at \$635 including shipping. Also for sale are casting sets for the Frisco and the Hercules engines at \$745 and \$535 respectively. A visit to this site would be worthwhile for members interested in hit and miss engines. Under "Helpful Links", there are leads to Rocky's Model Engines, DeBolt Machine,

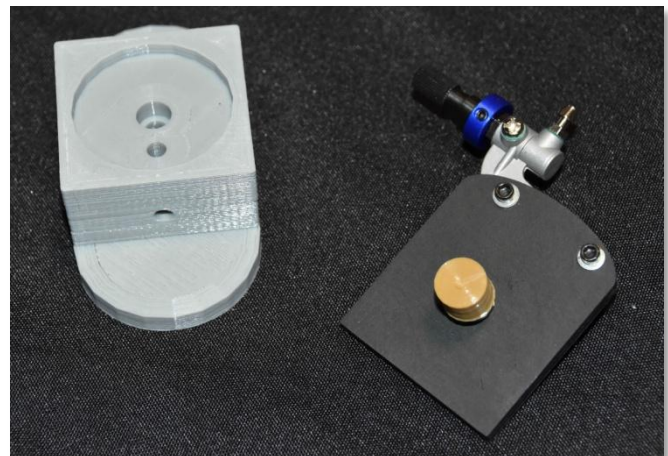
Inc., and Lee Pedersen. These sites are interesting and offer a number of casting sets and hard to find items. One member reminded us that the “Gray” engine castings are also available for less than \$400.



## BITS AND PIECES



Tim Horn brought his Philip Duclos “Six Cycle” engine. It was originally designed to run on fuel from a vapor tank. The runs were uncertain and of limited length. Tim switched over to propane. With plans from Jerry Howell’s site, he made his regulator with a 3D printer. For a pressure regulator he bought a part from a web site called “Mister Heater”. The site shows 11 regulators including a low-pressure regulator for \$15.80. Check with Tim to get the right one, ([mrheater.com](http://mrheater.com)).



His pressure gauge shows a flow from 1 to 4 PSI, he uses the lowest setting. A mixer was then needed to convert the constant flow to demand flow. The demand flow is triggered by the small partial vacuum created by the descending engine piston. He inserted a T-fitting in the line that also required a model airplane engine needle valve to nicely calibrate the airflow. Tim had problems with holes in his PLA plastic pieces created by 3D. He solved this by the use of a sealant of CA brushed on. If using ABS plastic, exposure to acetone vapors or brushed fluid will seal small holes. However, Tim was using PLA, and that required the cyanoacrylate. He will e-mail any member who has questions. His propane system has also worked well on other engines converted from vapor tanks.



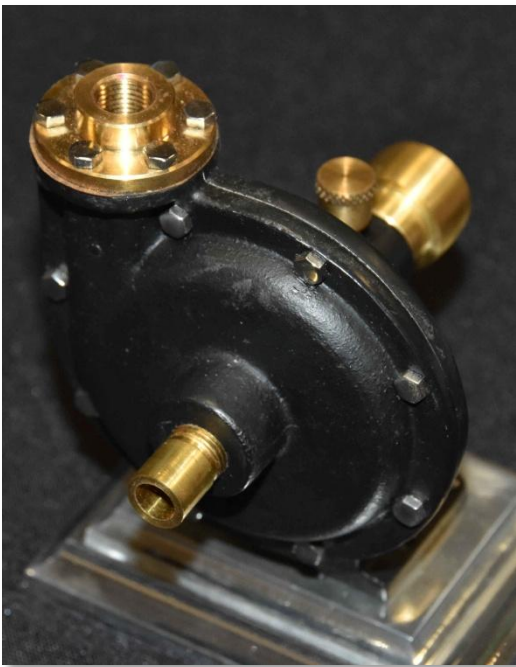
Jim Piazza has expanded his use of 3D printing to include metal printing. His first attempt was with metal laser sintering. He showed us two small pieces that cost sixty dollars from a commercial provider. It was an aluminum sintering that was very dimensionally accurate. His next purchase from another company was by the infusion process in stainless steel that was not satisfactory. The dimensions were not approximated. The cost was over \$170 and was refunded after a complaint. The next step is to have the entire blower assembly made; this will cost just less than \$400. With the addition of an abrade able coating, a graphite plastic material that will wear in to a very precise tolerance, Jim feels that he will have a satisfactory piece. When ordering such parts, you must provide the software file.



Carl Wilson showed us a marvelous miniature vise on a beautiful swivel base. First, he was urged to tell us about the “Wobbler” showed at the WEME Show. It is a simple engine that operated on airflow from a vacuum cleaner. It was a popular feature of past shows, especially with the young ‘uns. The vise is based on castings from Morrison and Marvin and represents the Wilton “bullet vise”. The casting material is 4130 tool steel, done in lost wax. The moving jaw is keyed into the body. The keyway requires a three-inch keyway broach in a one-eighth inch hole. It was an enjoyable project for Carl and he had to work out a few challenging kinks to obtain the final brilliant result. The castings are \$150 plus \$15. There are nice photos and full drawings on their web site. See: [morrisonandmarvin.com](http://morrisonandmarvin.com). They also offer a casting set for the Gade hit and miss engine for \$325 post paid.

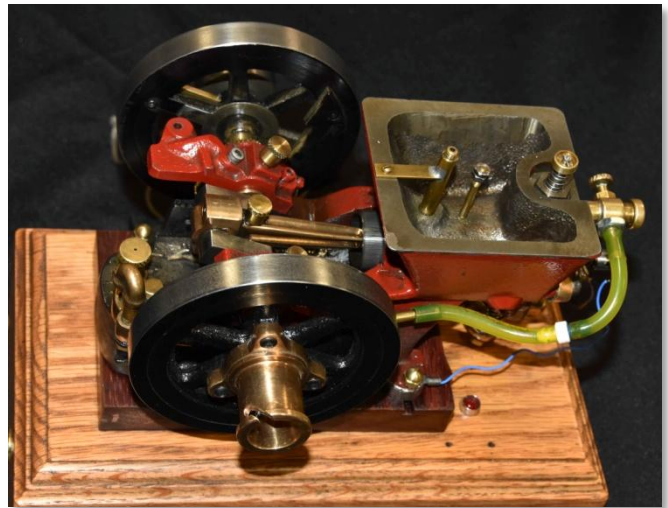


Larry Zurbrick needed a counter weight for his German equatorial mount on his telescope. Larry Bunch had a rusty old ten-pound cast iron barbell weight as a “freebie” at one of our meetings. This fitted in nicely between Larry Z's previous seven-pound and twenty-one pound counter weights. After cleaning rust and paint he affixed a machined aluminum hub, fashioned knobs, and modified a stainless steel socket head to clamp the telescope shaft. A Delrin button was inserted to prevent marring. He also repurposed a 45 pound barbell weight for an umbrella stand.



Joe Tochtrop marketed a kit for an old-timer water pump some years ago. Dwight inherited such a kit

from Ken Hurst some years ago and finished it. An attractive display is the pump connected with a belt to a hit and miss engine.



Some years ago, George Gravatt created a New Holland hit and miss engine and experienced problems. It used an ignitor system with the usual grief associated with that design. Paul took the engine over and solved a couple of the problems. The main difficulty was in the transformer. Paul discarded it and replaced it with a unit made from three twenty-watt florescent tube ballasts in parallel. This resulted in a decent spark. He also remade the carburetor, and now it does run, but still could use some further tuning.

#### WEME SHOW WRAP-UP:

In the last month's meeting notes the following statement was recorded: “Now, as a club, we have the task of plotting our course for future events”.

At this meeting, we had a lively discussion but did not fully “plot out our course”.

Options considered were a return to Vallejo, a return to the Hillsborough Concours, or simply to stay with our pleasant association with the Golden Gate Live Steamers and their Open House events. There was no strong impulse to return to Pleasanton with the current restrictions on running our engines. We decided to further consider our options and discuss them at each upcoming meeting.