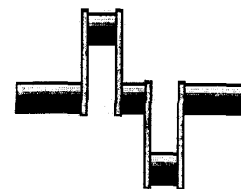


# The Crank Calls

*The Bay Area Engine Modelers Club, Branch 57 of EDGE&TA*



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**DECEMBER 2000**

## **NEXT MEETING**

**DEC. 15, 2000**

**AT 8 PM**

**AT**

**PAUL BENNETT'S SHOP  
3385 ENTERPRISE  
HAYWARD, CA**

President Pete Brooks called the meeting to order at 8 pm.

The November meeting started with the introduction of no fewer than six visitors! Is this a record? Eric Barney, Rick Levesque, Bob Vanvranken, Shawn Shirley, Jim Hussey, and Cecil Yother joined us for the evening. We welcome you to return.

Treasurer's report: We have \$360.00, not bad for this time of year.

Secretary and special events report: We completed our year's engine shows with two appearances at Dema Elgin's camshaft course for engine builders. We had SEVEN appearances this year, not including NAMES and PRIME. I hereby claim championship status for BAEM in this department, any challengers?

There was a generous round of applause for Jim Piazza who has kindly stepped forward to take Bob Allen's spot. His first newsletter was excellent, did you notice the digital blocking of the background in the jet engine photos? There was discussion of the club purchasing a printer to speed this process and increase picture quality.

There will be a December meeting, but not a formal one. It will be an evening of socializing, eating, drinking coffee and hot cider, and---please--- ENGINES. We want Ken, Dick, Dwight, Dave, Bob, Al, and all others to bring, and run, engines. Compressed air and Stirlings welcome as well. After all, we are engine modelers. Please bring spouses and significant others. Finally, bring good cheer and goodies. Perhaps Irene Lile will help with suggestions of things to bring if you are in doubt. If you don't bring goodies, come anyway. Last time we had a great plenty and all judged the evening to be a success.

As our illustrious, former newsletter editor Bob Allen secretary, BAEM

says: "Dues is due!" By December meeting, please. \$25, no increase, what a deal! Bob says he's doing well and will try to make the December "snack and yack."

## **BITS AND PIECES**

Lew Throop soldiers on with the ambitious Offy project. The water pump, oil scavenge pump, distributor take off, the gear train with its TEN gears, and of course---the two camshafts. Very impressive.

Al Vassalo brought another engine. This man is creative! This one, a solar powered Stirling. In the absence of direct sunlight he substituted a propane torch and it hummed merrily. It is a modification of an English design.

Dick Pretel showed his "F" Head, Wall four. It has the usual, fine Pretel finish and may well be the first "F" Head Wall in the world.

Roger Slocum's display board with his camshafts was on display. I think we have the world class camshaft grinder for mini's in our club.

(Speaking of mini's, Christine and I have a ten week old miniature dachshund keep us up nights now. Name? Minnie, of course.)

Ben Ridge dazzled us with a molded prototype for a distributor cap. He is working with Ken Hurst on a more complex cap for Ken's new Challenger. Maybe it will even have Ken's name engraved. The detail he can capture is remarkable and even includes fingerprints. I have visited Ben's interesting web site and recommend it highly. Try: [www.reproduce100s.com](http://www.reproduce100s.com) <<http://www.reproduce100s.com>>. He has a videotape for sale and has the latest knowledge of room temperature vulcanizing techniques.

I ran a hit and miss engine purchased from the Ukraine, via a friend in Florida. Hit and missers are tricky and quite different from the usual run of I.C. engines. Ask Carmin Adams and Dave Palmer. John Palmer shared a story about his executive pencil sharpener at a show during a cold snap. It took a cup of steaming coffee in the hopper to coax the beast into life. I also showed a static display model of a 255 cu. inch Offy from GMP in Georgia. A marvelously detailed "pot metal" engine in 1/6th scale. \$199.95 plus shipping. I also demonstrated a "Rigid" brand

3/8" tubing bender from Earl's Performance Automotive in So. Cal. It does a great job on stainless steel with a minimum of deformation.

Bill Nickels showed his PRIME photo album and also ran his video tape of the show with emphasis on BAEM engines. Very nice, thanks.

John Garis has generously offered to arrange a field trip to the massive United Air Lines maintenance at SFO for sometime in 2001. Nearly all in attendance said, "count me in!"

Tech topics, Scott Overstreet: Announced that the next topic will be with Ben Ridge on silicone RTV casting in January. Don't miss this.

Chris Leggo was the star of the November meeting with his newly completed Newcomen steam engine. This large engine, ? 4 feet high, takes two stout fellows to move. It is the first engine to successfully use a piston and cylinder-- definitely started a trend there. This engine dates to 1712! The only earlier attempts were by Savery and Chris has plans to model one of his engines next. The Newcomen is an atmospheric engine that introduces steam into a cylinder, cools it, and derives power from the differential in pressure.

Chris gave us an overview of the earliest pioneers and the

names of Savery, Newcomen, Watt, Huygens, Boyle and others were familiar. Make no mistake, these men were brilliant innovators--- they just didn't have a large body of knowledge to build on. Chris's model chuffed along nicely and is a challenge to build and run. He was told by others that "it couldn't work." There are full sized Newcomens at the Henry Ford Museum in Dearborn, [www.technology.niagarac.on.ca/courses/tech238g/newcomen.htm](http://www.technology.niagarac.on.ca/courses/tech238g/newcomen.htm) and one at the science museum in Kensington, England. Great job, Chris.

See you in December,  
Bob Krajian



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DUES  
IS  
DUE

# TECH TOPICS

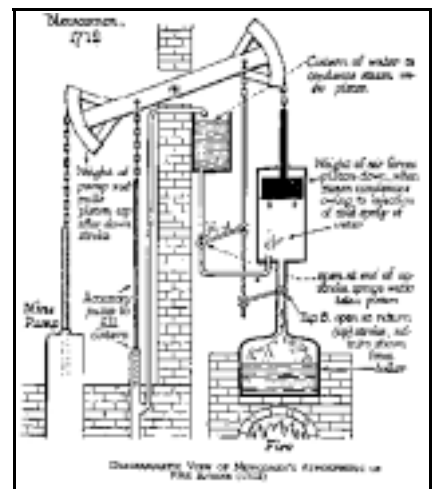
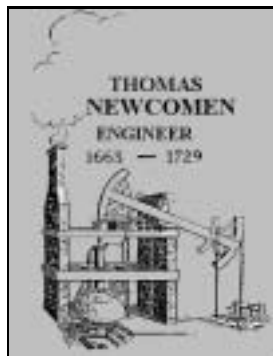
BY  
SCOTT OVERSTREET

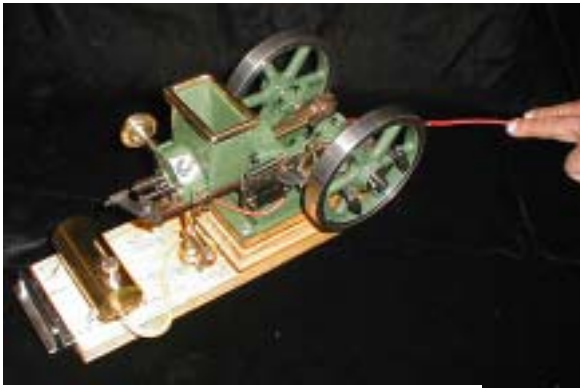
Well now, I think its safe to say that those of you who missed our last meeting or don't regularly attend, missed another super, excellent technical presentation. Chris Leggo took us back to the coal mines of England in the early 1700's and their water removal problems. Chris described the Savery pumping engine which had worked for some years, but was limited to removal of water down to about 50 ft. and then went on to Thomas Newcomen's engine. It, along with its deep well pump, was the first fire rather than animal powered system to accomplish removal of water from essentially unlimited depths. This, in turn, allowed access to the vast coal reserves that soon powered the industrial revolution. Newcomen's engine held its prime position for about 60 years until Watt entered with his engine which was basically the same as the Newcomen except that Watt moved the condensing function from the power cylinder to a separate condenser. This resulted in better fuel efficiency but not much else. In spite of the higher efficiency of Watt's engine and the much higher performance of later direct acting high pressure engines, many Newcomens continued to soldier on. The Newcomen was not displaced quickly as it was a safe, established machine requiring little from the operator, and its lower efficiency wasn't a big problem as it was usually run on waste coal from the mine itself. Chris told me after his talk that the last Newcomen was removed from commercial service in 1935 - amazing. Along with the history lesson, Chris did an excellent job teaching us some basic steam thermodynamics, without our knowing it, and then went on to describe and explain the Newcomen cycle in detail and finally to demonstrate it via his model.

Chris' model Newcomen is big and is really very special. Not only does it work with absolute authenticity, but its a beautiful job of blending historical construction details with the necessary piping, valving, and linkages, and it has sufficient gauging to show what happens inside during operation. A job very well done and a very well done presentation. Many thanks Chris.

There won't be a December Tech Topics presentation as we will be in full social mode. Bring your spouse, kids, guests, etc; and an engine or two for table decoration and/or to run and some munchies - we will stand around and socialize and show our guests what brings us together each month.

Scott

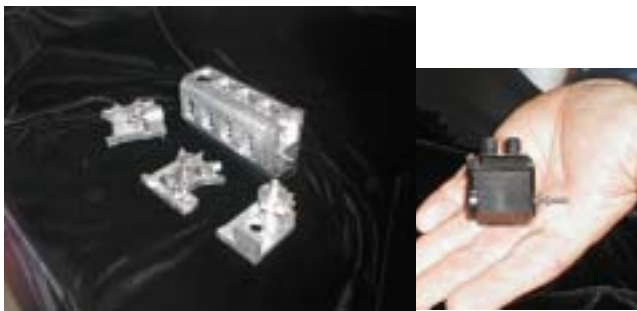




**Bob Kradjians Ukraine built  
Hit and Miss**



**Dick Pretels "F" head  
Wall Four**



**Low Throops Offy project**



**Al Vassalo Solar Sterling**



**Rigid tubing bender**



**Is this oiler  
the Real  
McCoy?**

**Roger Slocums Cam display**



**Photos by Mike Rhemus**