

# The Crank Calls

January 2007

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**NEXT MEETING**  
Jan 20, 2007 at  
Robert Schutz's Shop  
366 40<sup>th</sup> St. Oakland CA  
Doors open at 9 AM  
Meeting Starts at 10 AM

## Upcoming Events

???

## MEETING NOTES

Christmas party meeting, lots of engines on display, here are the pictures in no special order:

Ken Hurst's Harley Davidson v-twin



Carl Wilson's Doodle-graph:  
crank it up and make an interesting design



Jerry James: Four cylinder aero engine: fabrication in the front; patterns in stereo-lithography in the background



Dave Palmer: Recilinear: Dave's own design, an award winner at GEARS



General view of the engine table, it was stuffed



Shannon Lile: ARCO hit-n-miss in 1/3rd scale



Pat O'Connor (right) awards the BAEM Craftsman of the Year 2006 to Dick Pretel.



Dave Palmer's beautiful 3 cylinder version of a 1 cylinder Coventry engine published in Live Steam



Dick Pretel's OHC conversion of the 50cc Wall 4





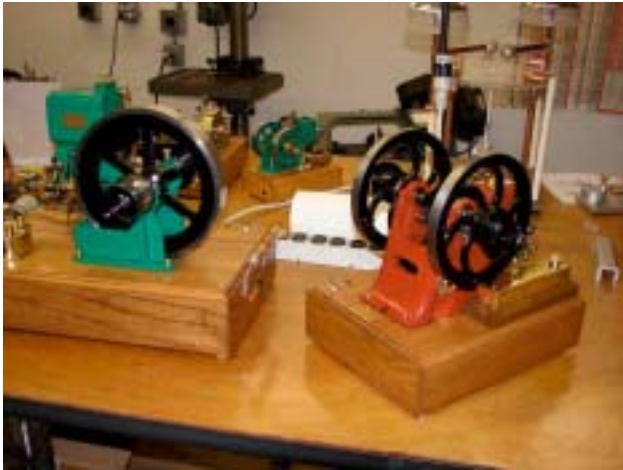
Dick Remington: What could be more appropriate for our Christmas luncheon than a "Chip Tree."



Dennis Mead: one cylinder Maier engine, made in Germany with piezo-electric ignition



George Gravatt: Atkinson cycle engine (on the right.)  
Dwight Giles: Vaughan hit-n-miss



Carl Wilson's Dirod electrostatic generator: crank it up and make sparks



Shannon Lile: He has written his own caption!



Paul Bennett and the rest enjoy Christmas dinner



### **TECH TOPICS (from Nov 2006)**

Dwight Giles showed us how to make gears like those in his water pump (see Meeting Notes for Nov. 2006) using a dividing head. (The best source of information on setting up and operating a dividing head is textbooks intended for the high school or junior college machine shop instruction.) Here are some of Dwight's tips:

Make some spare gears – you might need them.

Cut as many gears at a time as possible. Make a mandrel that fits the bore of the gear blanks and has a threaded section for a clamping nut. Turn the mandrel between centers on your lathe.

Mount the blanks on the right hand end of a long mandrel. Reason: the chuck or center of the dividing head will probably have some runout. A long mandrel supported in the dividing head chuck at the left and the tailstock at the right will have minimal runout at the tailstock end. So cut the gears there.

Use a dial indicator to align the top and side of the mandrel parallel to the travel of the mill table. Move the tailstock as necessary. If the dividing head does not have alignment keys matched to the tee slots in the table, align it as well.

Eyeball the height of the center of the gear cutter to the point of the tailstock center.

For the "first trip" around the blank just make a scratch on the blanks. Be sure that you have arrived back at the same hole in the dividing plate from which you started, and count the number of scratches. Be sure you are cutting the correct number of teeth.

Cut the full depth of the gear tooth at one pass.

From Pat O'Connor: A simple cheap spin-index fixture can cut any number of teeth that will divide into 360 evenly. You will have to keep close track of where you are at and put the pin in the right hole, but it will do the job.

## **Stuff for Sale**

Steve Jasik (your editor) has 7.25" radial saw blades, and other miscellany

Grant Saviers has:

Sealed lead acid batteries , 12v x 16 Amp Hours, size is 7" L x 3" W x 6.5" H, can mount in any orientation except upside down, removed from communications equipment, made by Genesis (Hawker Energy), great for starting larger models as there is no current limit. USA made, premium battery two for \$20. 30pcs available.

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