April 2003

PORTLAND MODEL ENGINEERS
FOUNDED 1995

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Last meeting was at the **Battin Power Service Co**., courtesy of **John Battin**. (Thanks **John**). This company specializes in the joining of engines with generators. The turnout was even better than the March meeting as can be seen in the following pages. Among the topics discussed were: (1) What should be the club's role in continuing the PRIME exhibition? (2) Should the club include geographical miniclub neetings consisting of perhaps 10 to 20 members? (3) A signup for a special interest group specializing in CNC garnered numerous signatures. (4) **Larry Cramer** has passed because of a stroke. (5) **Dave Carr** has moved and is sharing space with the **Marine Propulsion** shop on Swan Island.

Next Meeting is scheduled for **April 12th 1pm at NEWBERG High School.** See map for directions. -also bring your thoughts on what the club's role should be with respect to PRIME.

Weekly **Pattern Making Classes** taught by Gary Martin start thursday April 3 at Wilson HS. Hours are from 6:30 to 9:30 pm.

FOR THE BEGINNER II

Last time I said mild steel does not harden well. Some of you know that is not the whole truth. Mild steels can be Case Hardened by adding carbon to the steel. It can be done in the home shop without a lot of expense. I have used Kasenite a brand of case hardening that you can get at some machine outlets. Be careful about the fumes in any heating or burning jobs. Also don't forget the safety glasses. I have case hardened two ways, rolling it in the Kasenite while the part is red-hot (1700 degrees for those of you who like numbers) and packing the part in Kasenite in a metal container and heating it to red-hot for a while. I find packing the part in a box is very messy as I only use a torch for my heat source. Using tongs or large pliers I heat the part to red heat and then put it into the Kasenite. I use the can it came in if it will fit. If the part is to big I will put the Kasenite in a box and cover my part with it until it cools off. If you do this several times, the hardness may go deeper. I temper and harden the part after the Kasenit treatment.

If there is something you want to know let me know and I will try to find an answer..

Wes Ramsey

Tidbits:

(1) From **Bud Statton**: The letters **Bob Eaton** used to etch his label plates are available from City Liquidators. They have two buildings and the letters are in the office equipment one on the East side under the bridge. They are in the back and best of all are 10 pages for a buck! all different fonts too. -Bud.

(2) Editor's **Errata**. Sorry I misspelled your name in the last newsletter **Roger Rudert.** I'll try to do better from now on.

Metal Sales:

(3) By the inch: **Metal Supermarket** 503 258 1151; 13319 NE Whittaker Portland

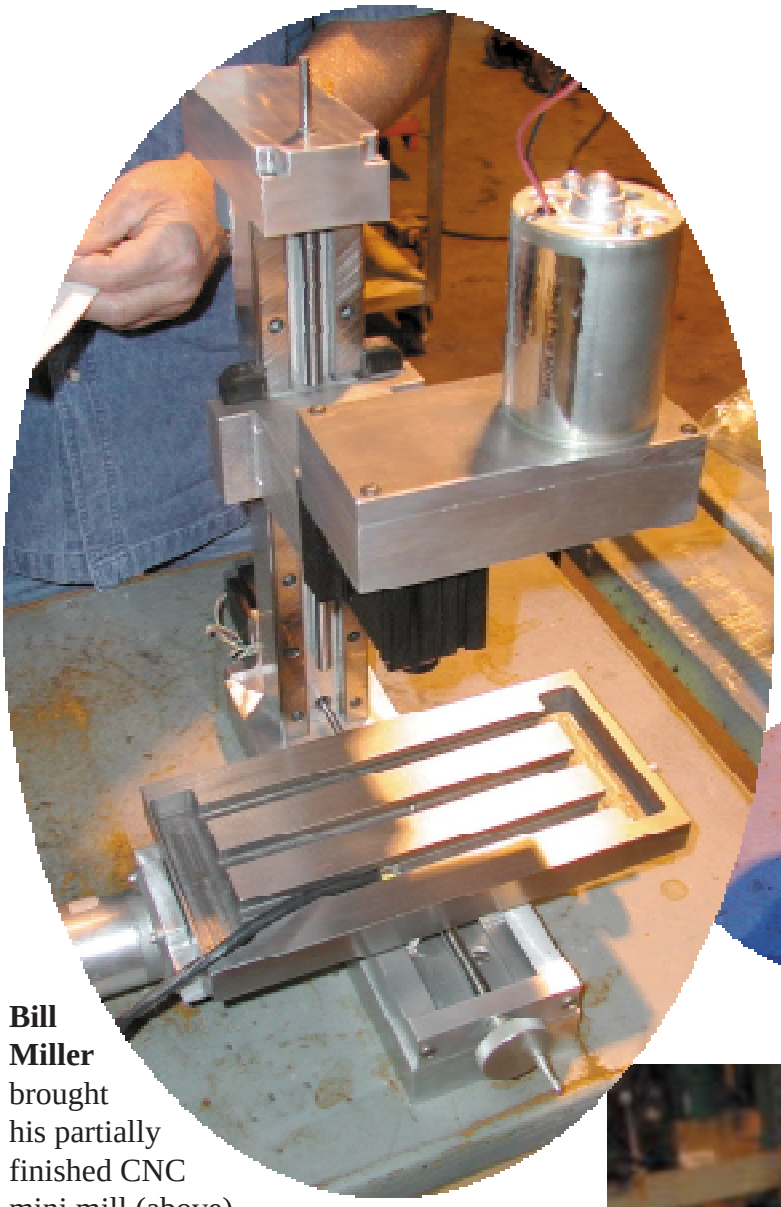
(4) By the pound or the piece: **Pacific Machinery & Tool Steel Co**: 503 226-7656; 3445 NW Luzon st; Portland.

Interesting **web sites**:

(1) **Animated engines site** http://www.Keveney.com/Engines.html

(2) View a summary of **machinists' tips** at this web site for users of smaller lathes, shapers amd milling machines: http://www.tbaytel.net/jstudio/#filetips
The author has separated comments into dozens of categories (e.g. broaching or reaming). See how other machinists have solved problems.

(3) View Patents at this web site of the month: http://patft.uspto.gov/netahtml/search-adv.htm
This page allows you to search for patents of a certain type. For example, if you wanted to search for sex objects ...oh wait, no, thats the other group, I mean metal lathes, you would first type the 4 characters "ttl/" in the query box (ttl stands for title. Follow this immediately (no spaces) by the 3 words "lathe and metal". Your query would look like this: ttl/lathe and metal. Click the search button and wait for a summary page of patents to appear. Click on the patent that interests you to get more information.



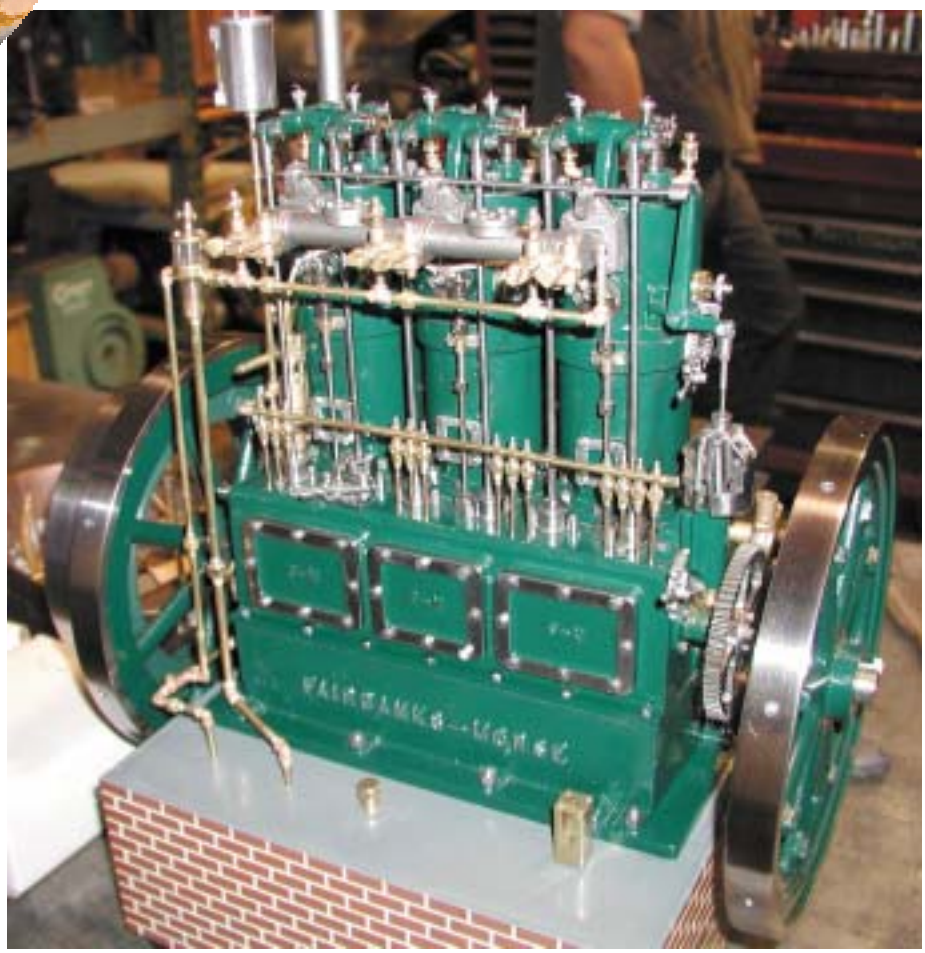
Bill Miller brought his partially finished CNC mini mill (above). This unique mill has a detachable headstock which can be mounted on the table thus allowing operation as a CNC lathe. Bill's next task is to attach the drivers and controller.

Mark Simmons brought his kit built power file (left) featuring a scotch yoke mechanism while **Richard Williams** brought his most impressive three cylinder model of the Fairbanks Morse gas engine (right). This model is mostly aluminum but has cast iron sleeves. Notably it includes an air start.

Dennis Wodtli constructed this "**Zog**" whose claim to fame is an oscillating upper disc derived from circular motion. Clever.

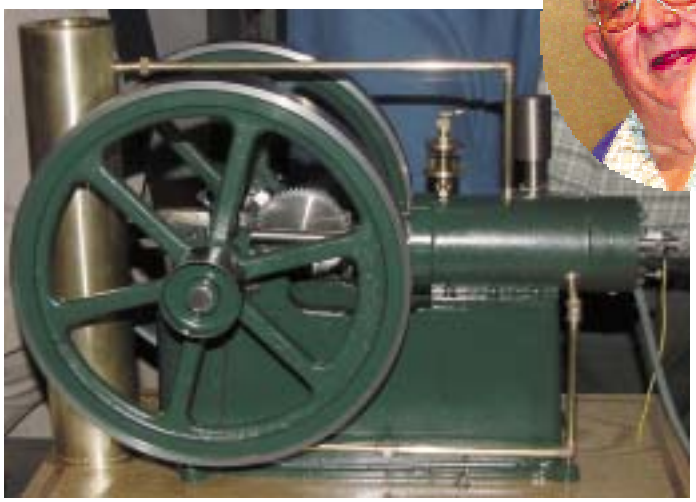
Tom Hammond brought the homemade drawbar (below) he built to hold the 4C collets in his rivett lathe.Tom wrote:

"I made it from a piece of 1" dia. 12L14 round bar, drilling 13/16" from each end until the holes met in the middle, then lathe-cut the 15/16" x 20 tpi thread for the collets. The outside was then turned down to .985" concentric with the bore. The hub is aluminum, with a needle thrust bearing incorporated to take the pressure of tightening a collet, and the handwheel is delrin, two layers laminated together around a flange of the hub."

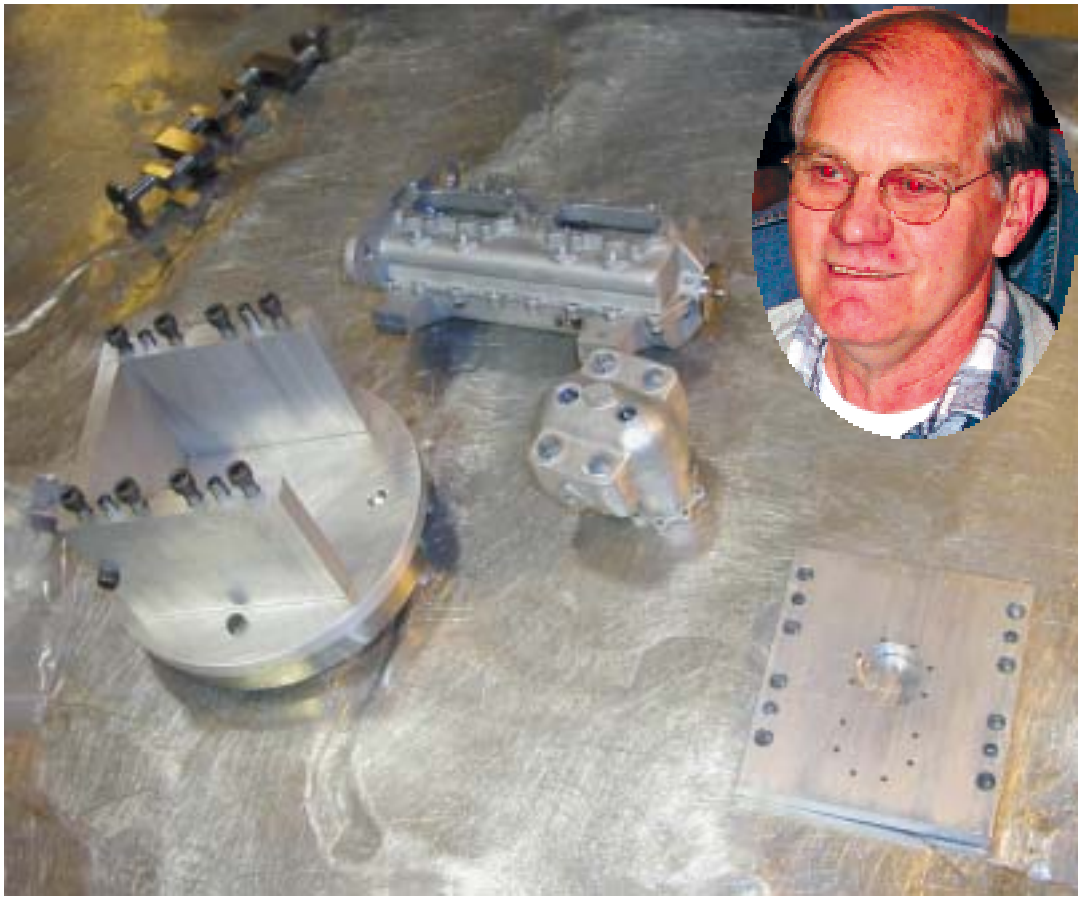


Al Pohlpeter shows the depthing tool he purchased with some intrepedation. This tool is used by clockmakers to determine the distance between centers of two enmeshed clock gears. Don't ask how much he paid for it.

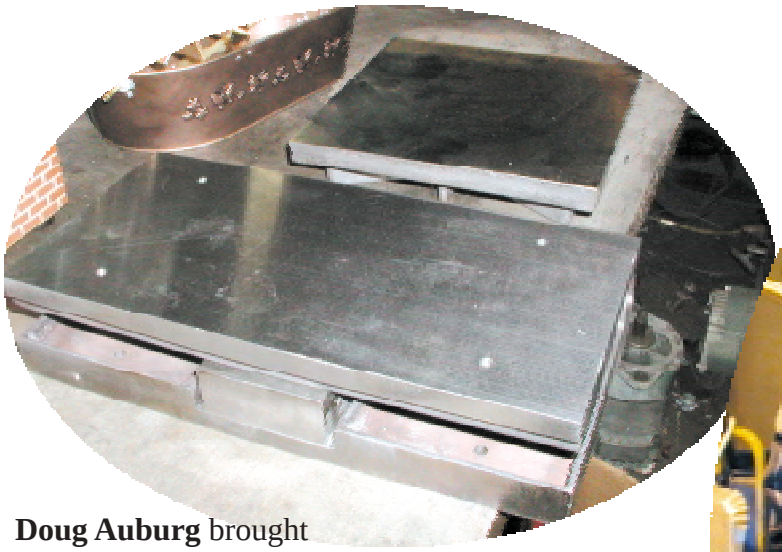
Pat Spurlock showed this bronze propeller he made - mostly by eye using the art he developed over the years.



Tom Stuart (left) displayed one of the 1/6 scale models of a 25hp Fairbanks Morse engine At this scale the bore and stroke are 1.5" x 2.5" and the flywheel is 10". Tom also sells the castings for this engine. **Hal May**, meanwhile, continues to make progress on his skeleton clock (right). As someone noted, though, Hal still can't tell time with it yet.



Although difficult to see in this photo (left), an exceptional casting of a 1911 Simplex engine block appears in upper center. Directly below it is one of the two head castings. Also shown is one of the crankshafts as well as two jigs constructed by **Charles Stark** (inset) to facilitate machining. Let's see. Are they jigs or fixtures? I can never remember. Charles also showed an impressive lost wax casting he made of a flywheel (shown above).



Doug Auburg brought his recently machined sine plates that he obtained from the club castings of months past.

Murry Lunceford brought this grand old straight eight gas engine (right and above). Did someone say it is for a Buick? Although somewhat shy, Murry received a standing ovation after he was asked to describe his engine.

The Club (left) **.** This is a rare view of many club members. Despite their age, many seem to be paying attention to the dancing girls (not shown).(Below) **Virgil Jeffries** again brought his Harley on a box It runs great. My Harley engines never ran this long.