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**Last Meeting.** The Portland Model Engineers last met July 12 at **Bartlett Enterprises**, courtesy of **Bart Pond** (shown in the inset) - thanks Bart.

And thanks for the fascinating tour through the largely automated shop. As shown in the following pages, club members brought an impressive array of mostly home built artifacts - clocks, cars, castings, camera adapters - most of the "C" models of interest.



The **Next Meeting (August 9)** is also scheduled at 1pm at **Bartlett Enterprises**. - see enclosed map. The address is 1900 NE 25th, Suite 11, Hillsboro. Gary Martin would like to note that there is a **board meeting** at 11am to work on the Son of PRIME.

The **September meeting** is expected to be at **Bud Statton's** where he has promised to get the lead out - oops I mean the iron out - of his cupola. This meeting will be our annual Bar-B-Q picnic. The **November meeting** is scheduled for the Iron Ranch.

**Contest continues. Free Prizes.** Help rename **Prime 2004** to something else and increase your chance of winning big time prizes for your suggestions. Fill out the entry form in this newsletter then bring it to the next meeting. Multiple entries are accepted.

Photos in this issue courtesy of **Gary Hart** and **Carl Petersen**. "For the Beginner" series courtesy of **Wes Ramsey**.

## For the Beginner

# 6

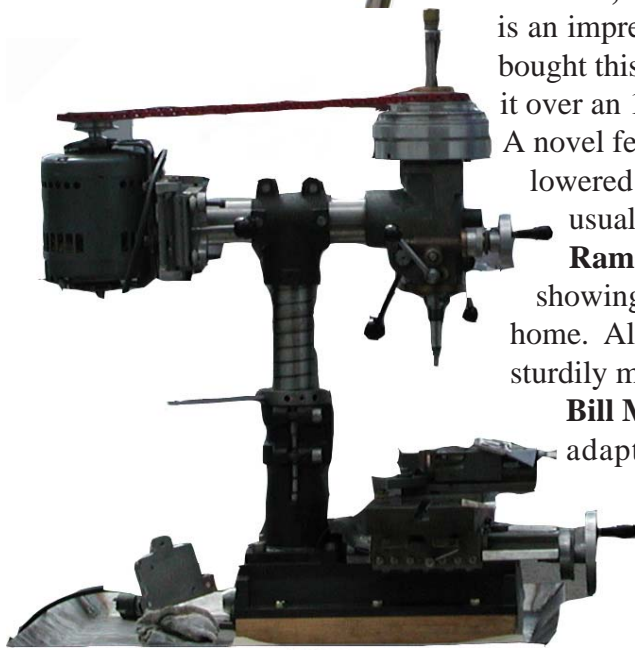
I have not said much about casting and foundry work as it looked like there were several people that knew a lot more about it than I. As I was watching some of the work done at the foundry I could see some of the things we learned in foundry at school could help some of the finished parts. I don't mean to put anyone down but the reason you cast something is to get a copy of a part. If you are going to just get a blob of metal to carve the part out you might as well not do the casting thing. There is a sprue and riser on most castings. The metal goes in one and out the other so you can tell when the mold is full and not build an air bubble in front of the molten metal. Some of the time it does not matter which you use for which. When hot metal is poured down a hole into soft sand it is going to wash away some of that sand. There is more to it than that but you are going to get stuff in the metal you are casting. If you cut a catch hole at the bottom of the sprue, all that stuff goes into that hole and clean metal will flow down the gate leaving most of the stuff behind in the part you are going to cut off. Keep the sprue and riser close to the part and large enough so they will cool last. If you don't you will have shrinkage in the middle of your part.

About using Styrofoam for patterns. When it gets hot and melts it will leave some of the molten foam which will keep your melted metal from filling the cavity. Foam is a great material for patterns, but I would pull it before putting hot metal on it. If your pattern is made correctly there are some tricks where you can even pick up fingerprints on your cast parts.

Wes Ramsey



**Al Pohlpetter** (left) holds a great looking hot air engine fan he cast and built after reviewing an old patent. (The engine is shown in more detail on the right). Unfortunately, this engine does not run. In addition, **Gary Hart** was unable to get it to run and there is now some uncertainty about whether the patent describes an operating engine. Hmmm.



**For Sale, for sale, for sale.** Starting on the left is an impressive Dore Westbury mill. **Tom Hammond** bought this in England as a casting kit a few decades ago, constructed it over an 18 month period, and used it for light duty milling until recently. A novel feature not evident in the picture is a long column which can be lowered into the base. It also allows slow spindle speeds which is unusual for smaller mills. It is now owned by **Dave Francisco**. **Wes Ramsey** offered another mill for sale (shown at lower left). Although showing substantial wear, its small footprint should encourage a new home. Also for sale (below, center) was a high speed drill press - very sturdily made with the double columns. Finally, **Bill Miller** is shown holding a camera adapter for an oscilloscope.





Still more offerings. Counterclockwise from upper left: (1) **Gary Martin** shows a pattern he made as a part of the set of patterns/molds he has been commis-

sioned to build for a naptha engine. These were used in auxiliary launches in the US Navy. (2)

**Mark Simmons** holds a camera adapter

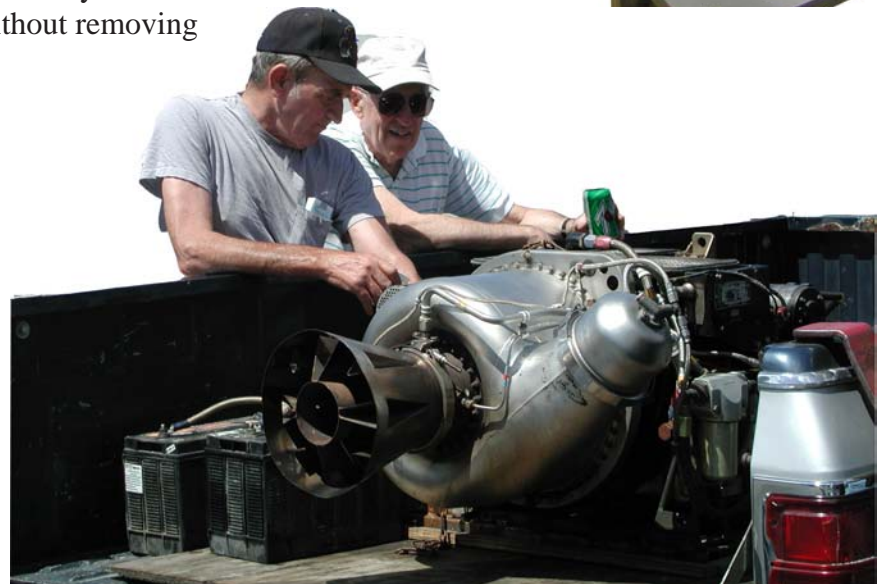
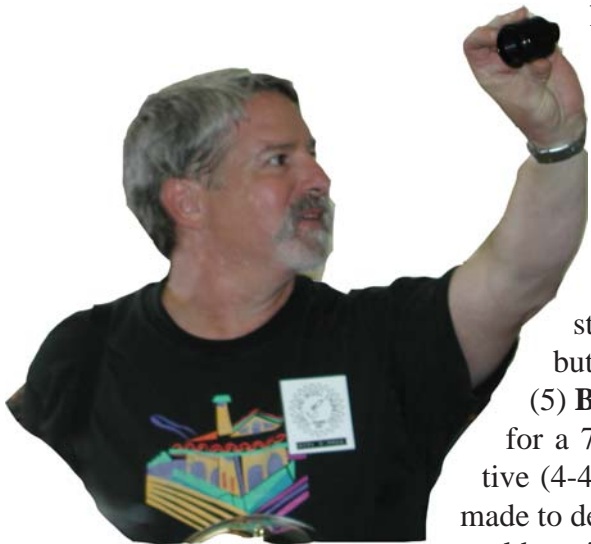
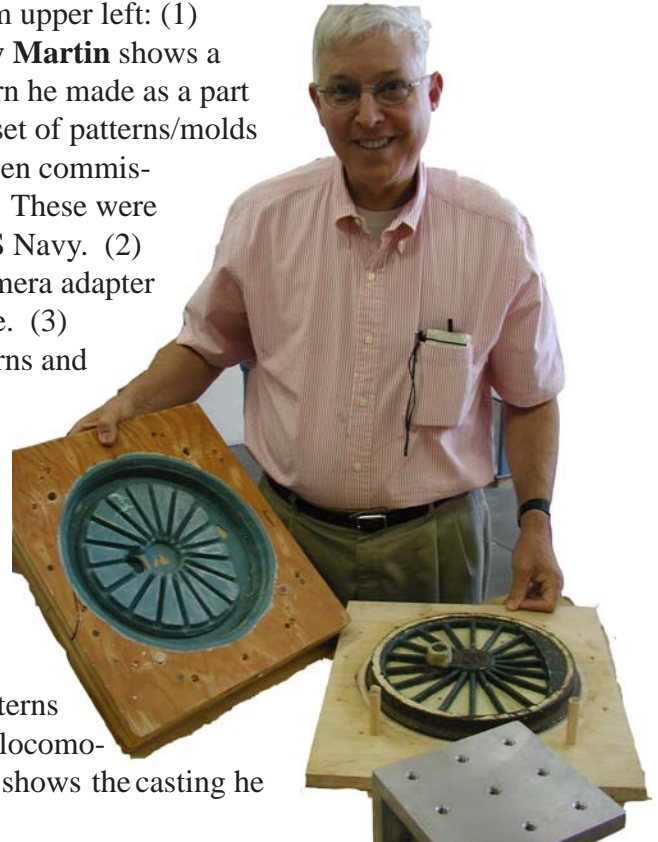
he made for a microscope. (3) More examples of patterns and castings. (4) **Murry Lunceford** brought his turbine powered gen-

erator so he could watch viewers plug their ears while he started it. Not home made but impressive nevertheless.

(5) **Bud Statton** holds the patterns

for a 7-1/2 inch gage Atlantic locomotive (4-4-2). (6) **Jim Pfaltzgraff** shows the casting he

made to demonstrate styrofoam mold casting (without removing the styrofoam).

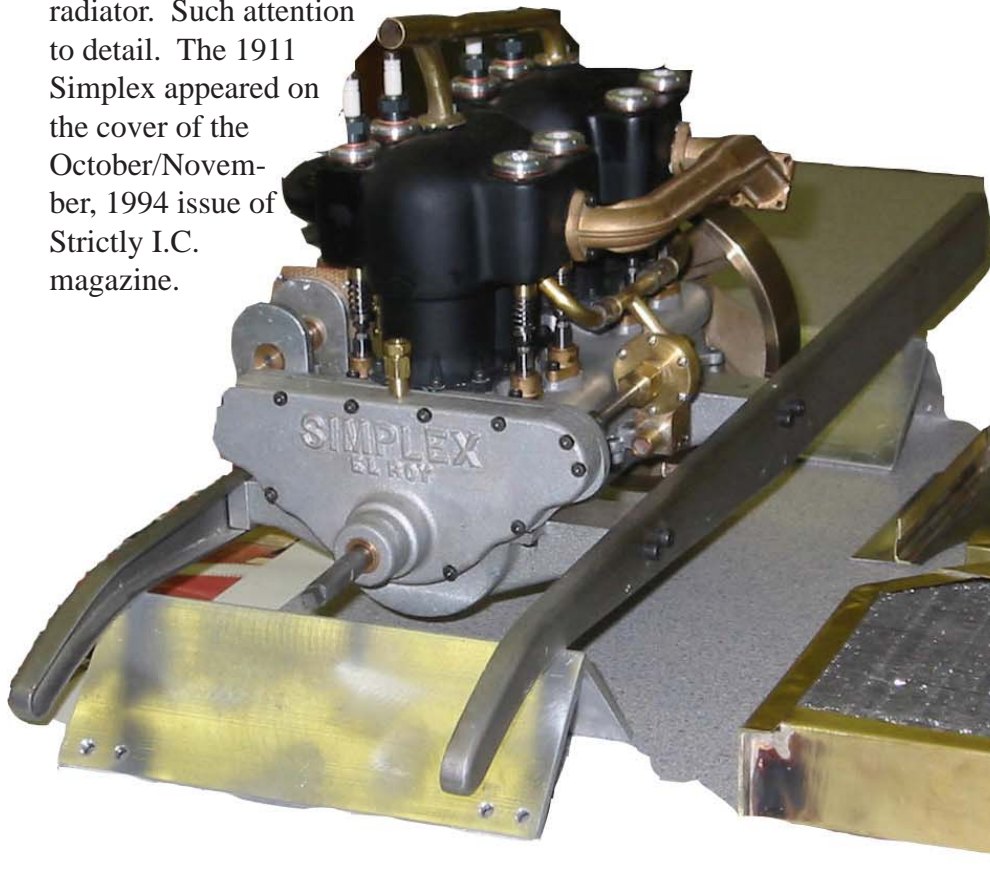


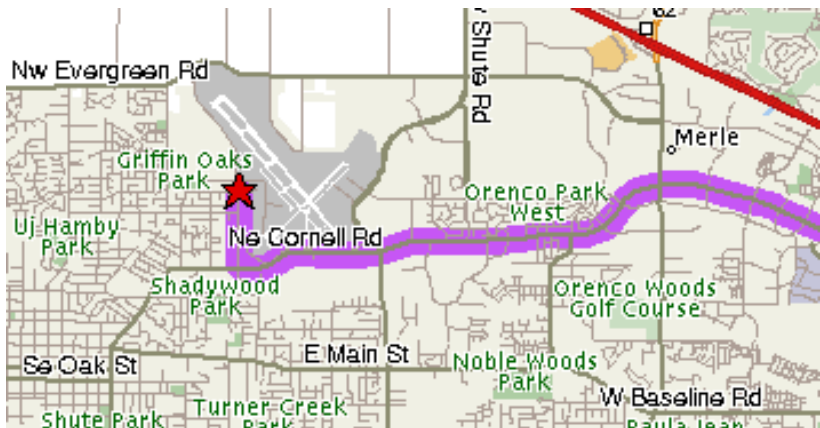
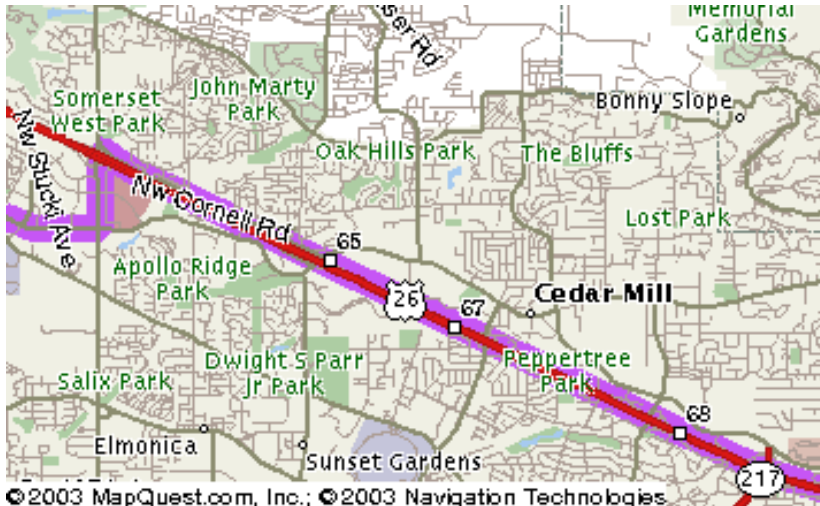
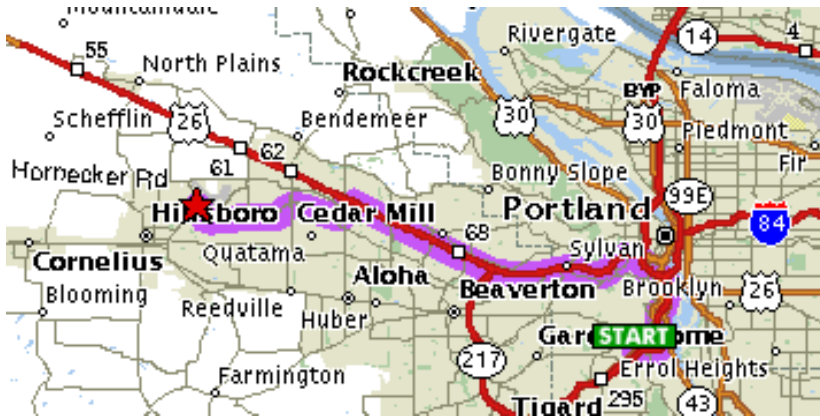


**Hal May** (left) finished the marvelous wind up clock he built as an anniversary present for his wife. It is a John Wilding design that Hal built in large measure using his CNC mill. Hal also brought in a fully functioning “stress reliever” (below) built of purpleheart and teak by one Paul Strait. All of the machinists spinning this device were found to have lower stress levels.



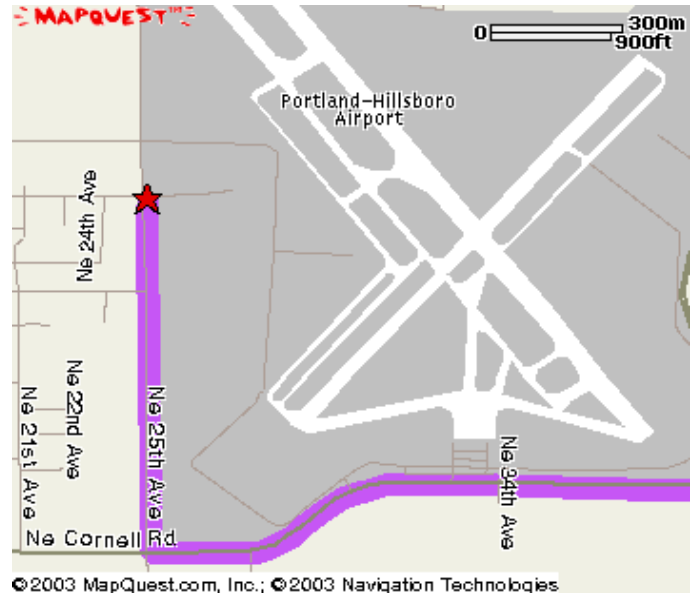
**Chuck Stark** continues to show steady progress on his 1911 Simplex as demonstrated below. Also shown (at right) is a close up of the radiator. Such attention to detail. The 1911 Simplex appeared on the cover of the October/November, 1994 issue of Strictly I.C. magazine.





- Directions to **Bartlett's**  
From Mapquest
1. From US-26 West bound from Portland 1405 toward BEAVERTON travel 9.66 miles.
  2. Take the 185TH AVE. exit- exit number 64- toward ROCK CR. Travel 0.29 miles
  3. Turn LEFT onto NW 185TH AVE. Travel 0.58 miles
  4. Turn RIGHT onto NW CORNELL RD. Travel 4.61 miles
  5. Turn RIGHT onto NE 25TH AVE Travel 0.57 miles
  6. Turn right into parking area. Travel 2 blocks and park in right hand lot.
- Total Distance: 16 miles

GPS 45.538812, 122.956887 or  
45 32.329, 122 57.413



### Optional Entry Form to Rename Prime 2004

Your own name \_\_\_\_\_

Your phone \_\_\_\_\_

Your suggested rename \_\_\_\_\_