November 2003

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Last month's Meeting had a great turnout as witnessed in the included pictures. Thanks **Alan Shurman** for use of your facilities.
November meeting is scheduled for R Plastics vacuum forming in NE Portland. See enclosed directions . Meeting time is 1pm on November 8.
Future meetings have been tentatively scheduled through April. See the Meeting Schedule box below.
The **Men, Metal and Machines** exhibition, in Visalia, CA was quite successful according to it's sponsors (Gary and Jared Schoenly - the Cabin Fever folks). They plan to be back again next year. Facilites were excellent, the town was built for foot traffic and the exhibits were of the expected show room quality. Nevertheless, the show could have benefitted from more exhibits of a more innovative and diverse nature. Examples include the home designed and built CNC mill by **Bill Miller** and the series of Harley engines by **Virgil Jeffries**. (These two products were the only submissions I could find from the Willamette valley clubs). Plenty of room was available as only about half the table space was used.

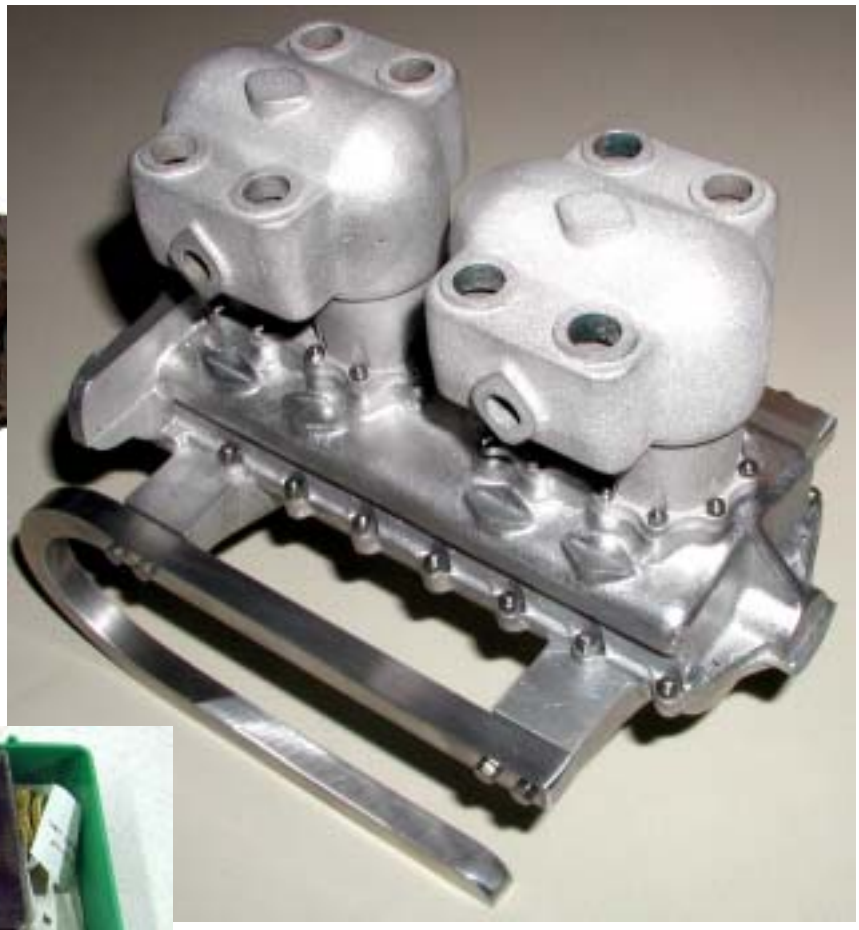
Meeting Schedule

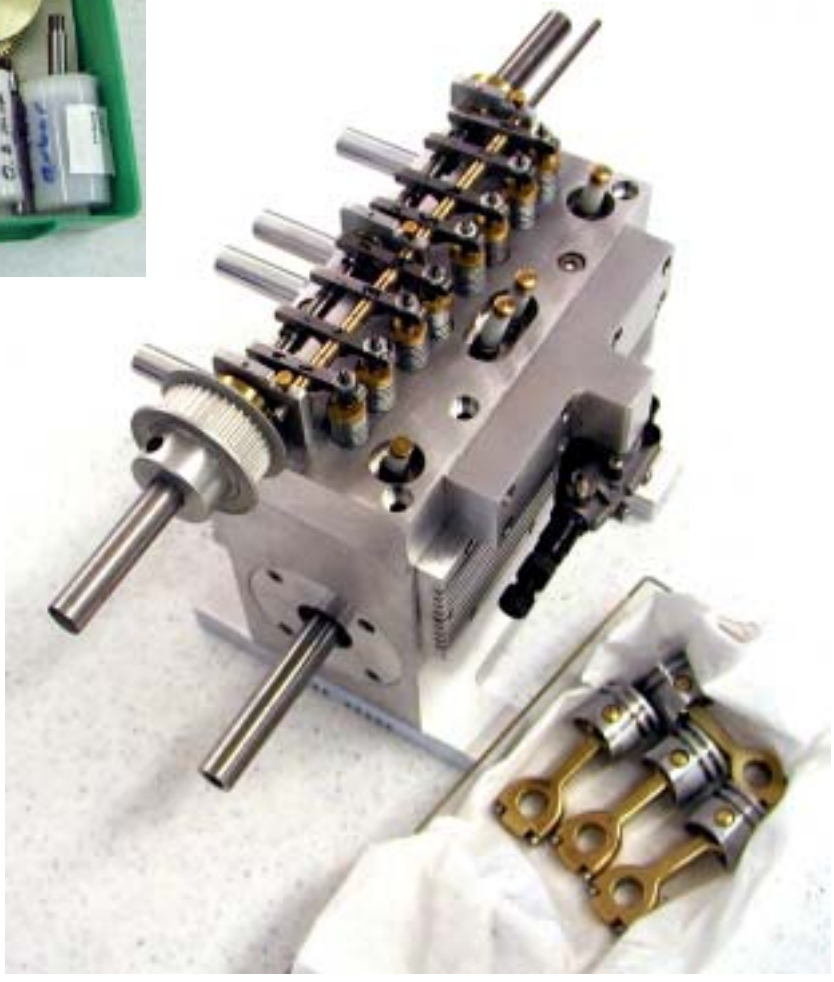
All Following Subject to Change: **December 13**: Paul Lawsons hanger at Pearson Airpark, Vancouver, WA, 2004: **January 10**: Paul Pierce Antique computer collection, NE Portland, **February 14**, Mesher Tool, NW Portland, **March 13**, ???, **April 10**: Bill Mitchells Orchid Farm and Steam Train in Yamhill.

For the Beginner # 9

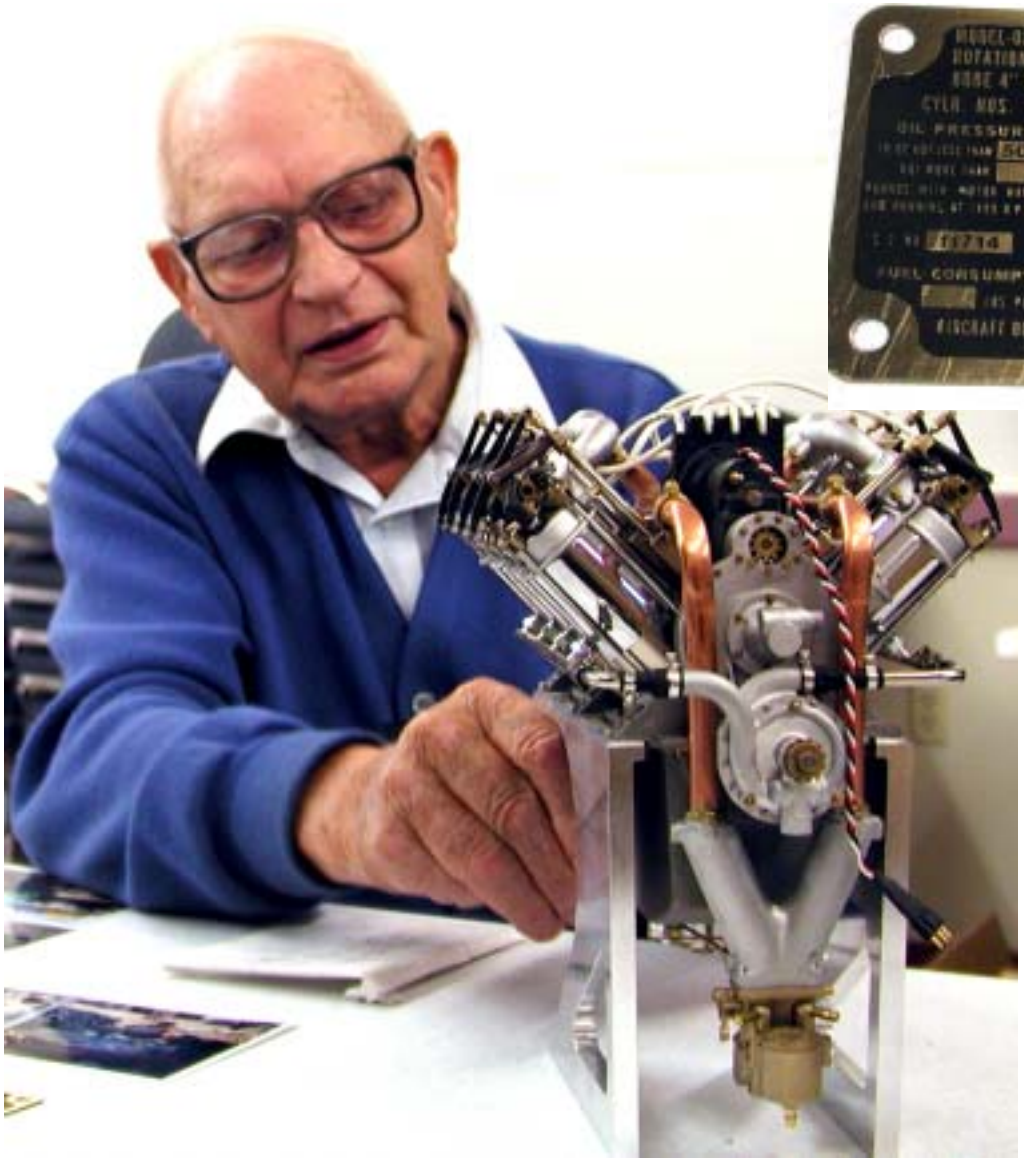
OK, So I shouldn't copy right out of the book. Last month I said, " if you don't grind the tip of your drill even you won't get a true size hole." It was pointed out to me that if you drilled a pilot hole first your hole would be the correct size. I stand corrected.
"How fast should I drill with this size drill"? If you want to do some arithmetic one formula is,
RPM = (CS TIMES 4)/D.
Where CS = cutting speed and D =diameter.
A cutting speed table from my book is, Low carbon steel-90, Aluminum- 300, Cast Iron , 70, Alloy Steel , 50, Brass and Bronze , 120. Be careful when drilling Brass, Bronze, Copper and Aluminum, they have a habit of grabbing the drill. I could not get my high school students to do any math so I had them drill small drills fast, big drills slower. If the drill turns blue, you are going to fast, the drill is to dull or the material is too hard and the teacher is going to yell at you. Feed may be controlled by the "feel" of the cutting action and by observing the chip. (A long stringy chip indicates too much feed. Cast iron will produce a granular chip.) Right out of the book.
On deep drilling, don't let chips bind in the hole as they cause binding and heat and can break the drill. Ease the feed once in a while and clear the chips. Oil or coolant helps to cool things.

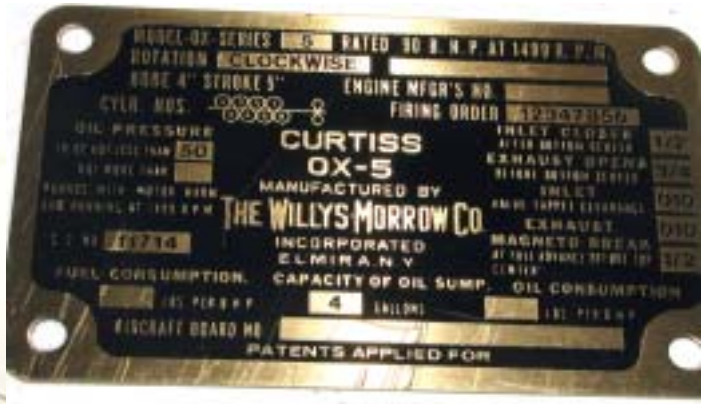
Wes Ramsey





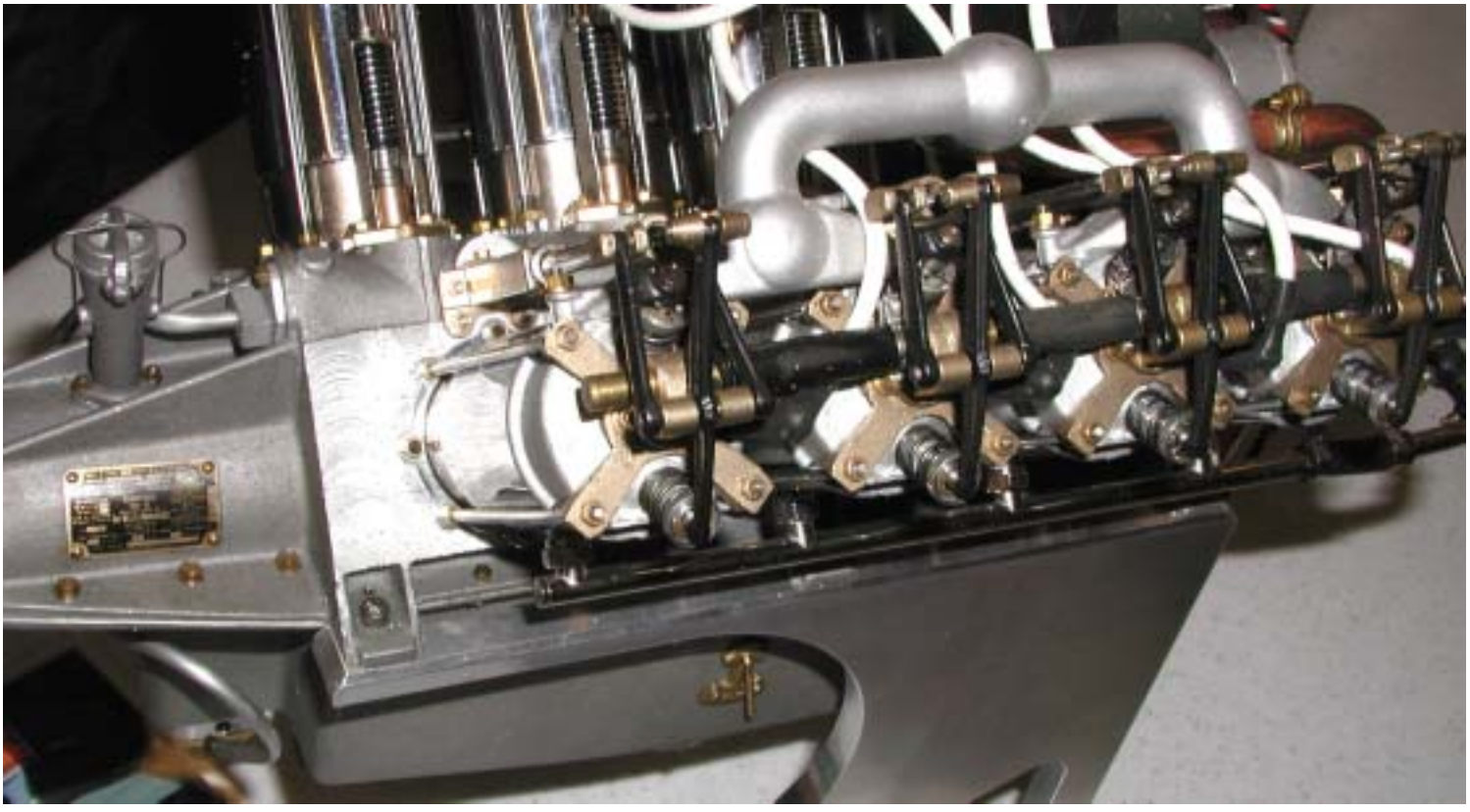
Ongoing projects: **Bud Statton** points to the plug of solidified iron (top left) which he thinks plugged the exit hole in his cupola during last month's meeting. Bud is confident that he can remedy this inconvenience. Upper right shows the current status of the 1911 Simplex engine under construction by **Gary Hart**. Directly above are the extra pieces of the wind up clock being constructed by **Hal May** to make three clocks. Hal says he needs all these clocks in his shop so he'll know when its time to eat. At right is shown the current status of the Sea Lion four cylinder gas engine under construction by **Bob Eaton**. Bob used some innovative methods to construct the pistons and rings but there's a chance that it'll run anyway.





What in impressive project. **Fred VanAbkoude** demonstrates a V8 gas engine he bought. It is modeled from the Curtiss OX-5 airplane engine produced by the Willys Morrow Co. Although difficult to read, the brass plate (above) describes a 4" bore, 5"stroke and 90 hp at 1400 rpm.

An overhead view of one bank of engines is shown in detail below.



John Dush, shown above constructed this full scale version of a Browning machine gun. At right are a variety of models and tools on display courtesy of **Gary Martin**. Notable are a Quorn (constructed and owned by Tom Hammond), a Gade engine and castings for an 1895 Merry. Below shows many of the scruffy members that attended this informative meeting.

DIRECTIONS TO R PLASTICS INC

6410 NE HALSEY

PORTLAND

R Plastics is near the crossing of I-84 and NE Halsey in Portland.

A. **From I-84 Eastbound** take the 68th Avenue exit.

1. After 1/4 mi take the NE Halsey St exit on the left.
2. Turn left onto NE 68th and another left onto Halsey.
3. In 1/4 mi look for 6410 NE Halsey.

B. **From I-84 Westbound** take the 42nd Ave exit.

1. Turn right (East) onto NE Halsey.
2. After 22 blocks or so find 6410 NE Halsey.