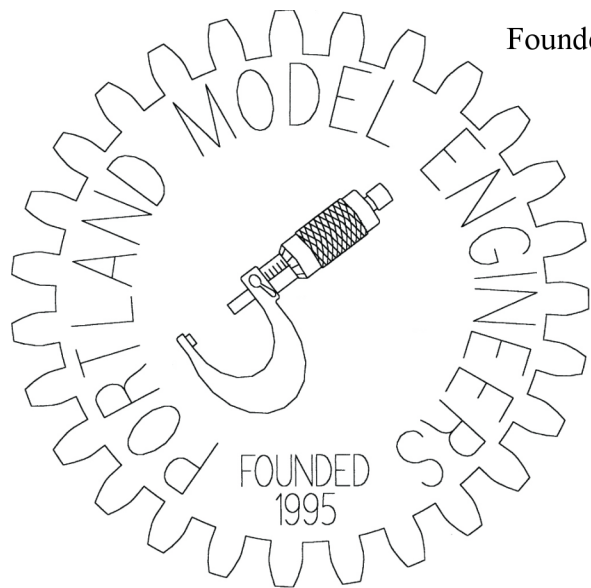


Founded by Dave and Beth Carr in 1995

February 2007

<http://www.portlandmodelengineers.org>



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For The Beginner #37 by Wes Ramsey

The Steady Rest

The January meeting proved to be an entertaining mix of stories, new projects and old favorites. The Rodent Dispatching Contest was moved to the March meeting. So you get a few more weeks to work on the "unnecessary force" portion of the contest. So far only a couple folks have gotten very far so it is wide open.

Next month we will meet at Grant Carson's shop on Saturday, February 10th, 1:00pm. Thank you, Grant, for providing a great place to meet!

A & G Products
7360 SW Bonita Road, Unit C
Tigard, OR 97224

Remember to bring your metal-related projects -- complete or not. There are refreshments as always and a chance to talk to some fine folks who share similar interests.



John Benjamin describes his adventures in creating a special gear for his mill.

On a lathe, long shafts tend to vibrate when cuts are made, leaving chatter marks. Even light finish cuts will often produce chatter when the shaft is long and slender. To help eliminate these problems, use a steady rest to support work pieces that extend from a chuck more than four or five diameters of the work piece for turning, facing, drilling, and boring operations.

The steady rest is made of a cast iron or steel frame that is hinged so it will open to accommodate work pieces. It has three or more adjustable jaws that are tipped with bronze, plastic, or ball bearing rollers. The base of the frame is machined to fit the ways of the lathe and it is clamped to the bed by means of a bolt and crossbar.

A steady rest is also used to support long work pieces for various other machining operations such as threading, grooving, and knurling. Heavy cuts can be made by using one more steady rest along a shaft. More on this next month.

This material is from "Machine Tool Practices" by Kibbe, Neely, Meyer, and White. This is the text book I used when I taught high school shop. I have gone over most of interesting things in the book, and could use some other reference material. If you have any how-to material I could get some ideas out of see me at the next meeting.

For Sale:

W. H. Nichols Slotting Mill, 4" x 16" table, 3ph, \$1000
Walker-Turner 17" Drill Press, power feed, 3ph, \$1000
Various other small hand machining tools.

Contact John Heaney in Hillsboro

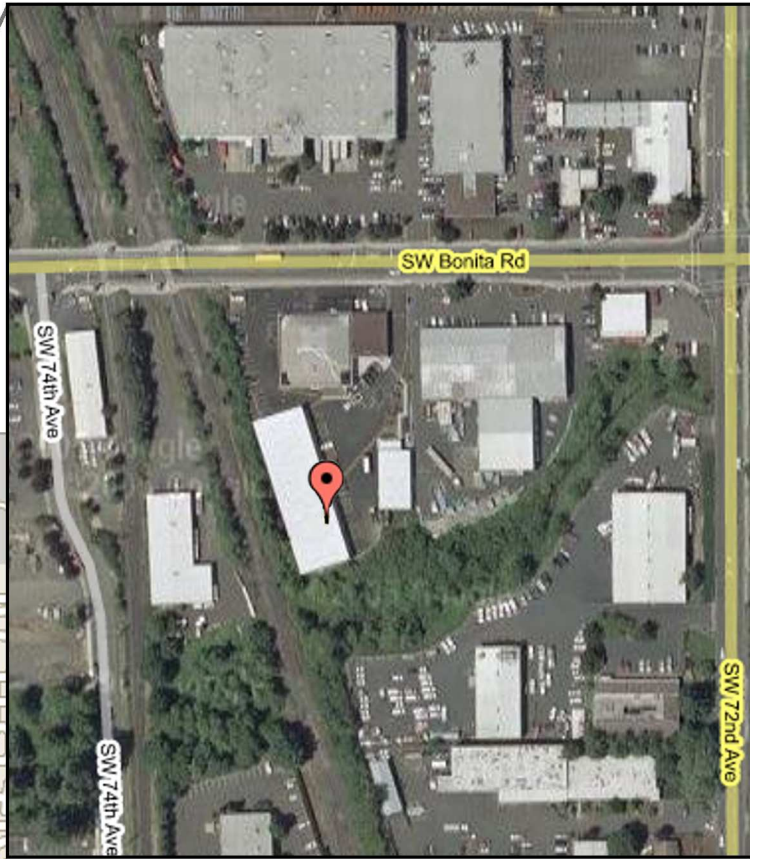
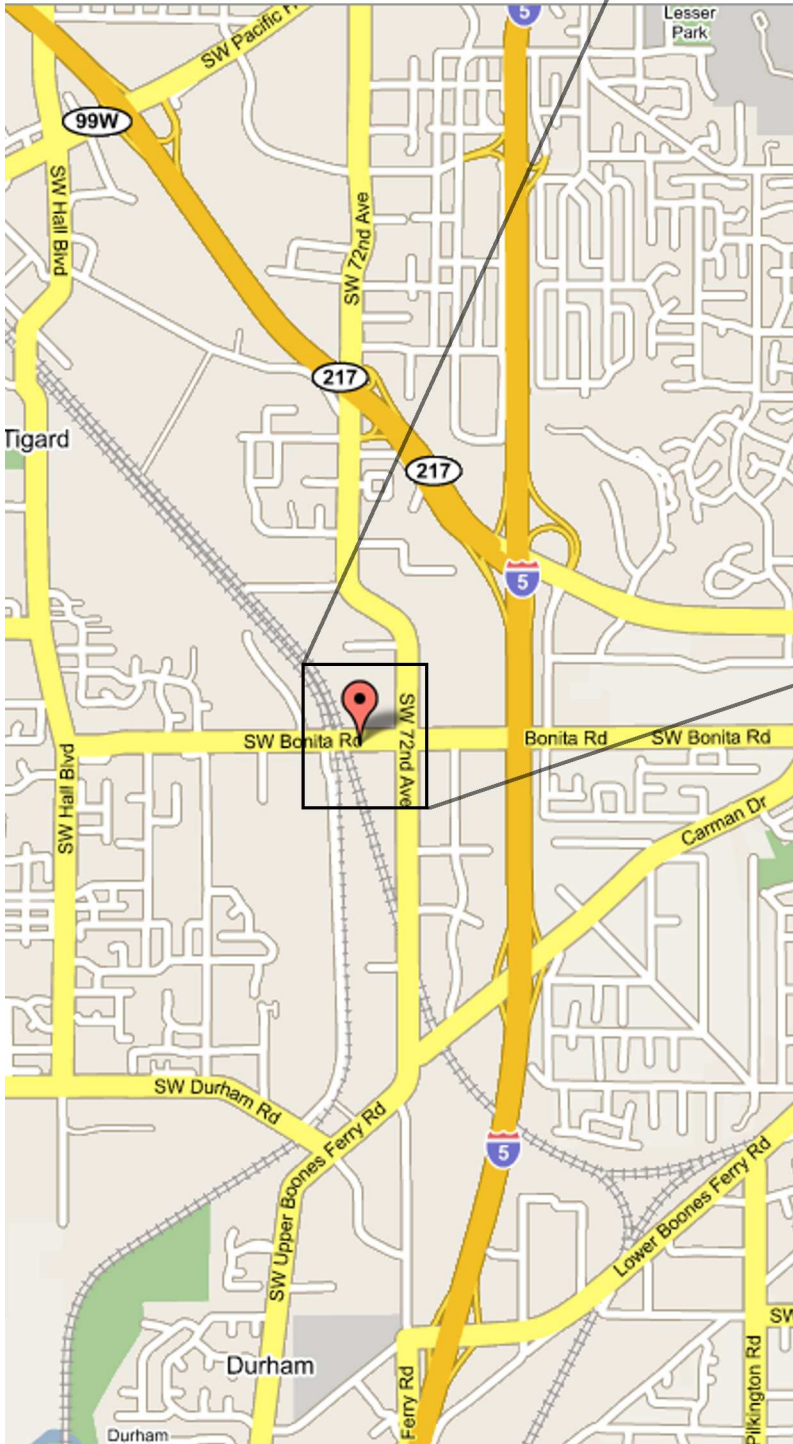
971-226-8602 or 503-649-7512

If your membership expired (as shown by 2006 on your address label) renew by sending a check for \$12 to:
PME Membership Renewal, c/o Carl Petterson, 1631 SW Pendleton St., Portland, OR 97239

A & G PRODUCTS

Saturday, February 10th, 2007
Meeting, 1:00pm

A & G Products
7360 SW Bonita Road, Unit C
Tigard, OR 97224



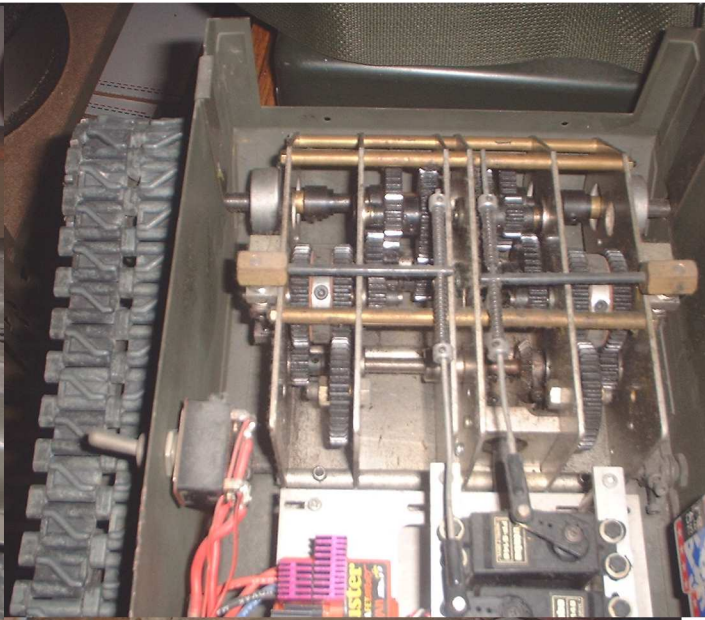
Directions to Grant's

From I-5:

Use exit 292 to Hwy 217, go north about 1/4 mile toward Beaverton to SW 72nd exit. Turn left onto SW 72nd Ave, go about 3/4 mile to Bonita Road, turn right. A & G will be on your left.

From Hwy 99 (Pacific Ave):

Turn south onto SW 72nd Ave, proceed about 1-1/2 miles to Bonita Road, turn right. A & G will be on your left.



The tank model was designed and constructed by Lou Chiu. He has been working on several scale models. This one is a 1/10th scale '74 Japanese tank. All the parts were made and cast by Lou. The picture in the upper left shows the extra detail work that went into the model. It has a working hydraulic suspension. The RC controller was also custom made to fit into a military-style case.

Below, Tom Hammond brought in a clamping aid to improve the Atlas horizontal mill (from one of Rudy Kouhoupt's books) and an optical stand.

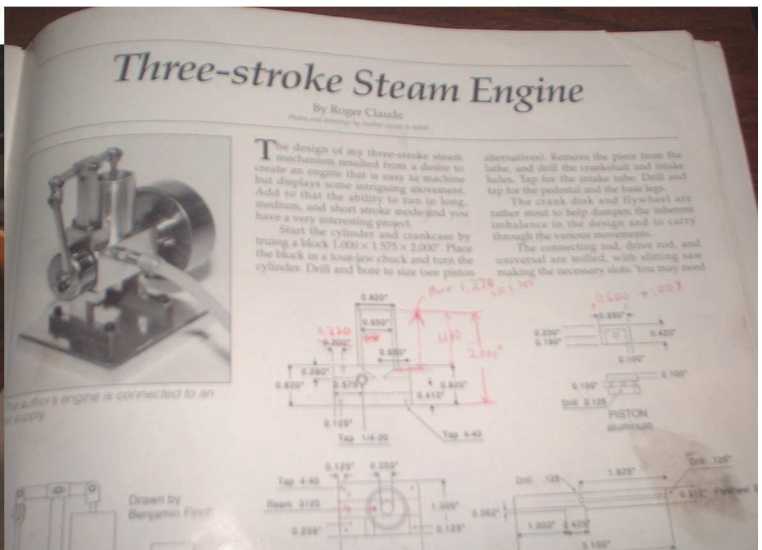


Hans Strangier and Grant Carson showed some steel dies that they produced. The die on the left includes bearing covers while the one on the right has two brake handles.



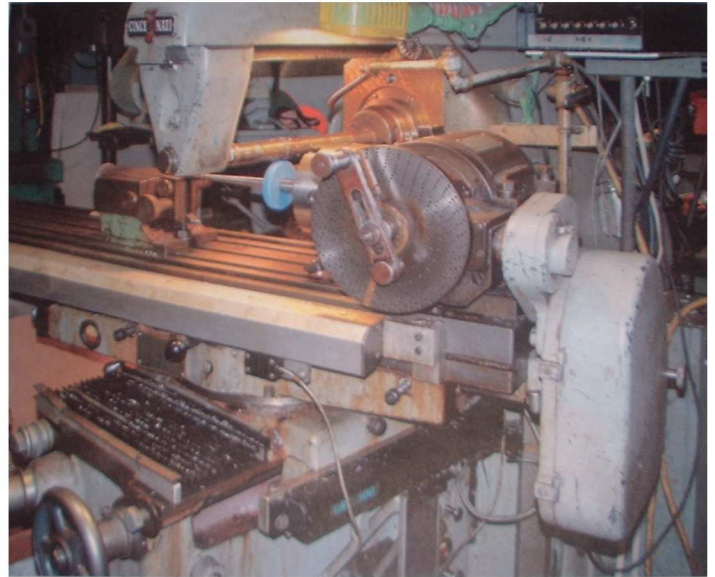
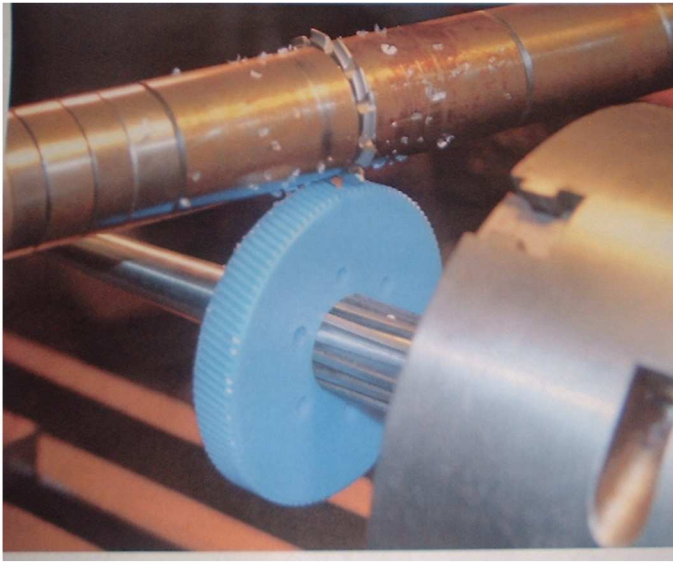
On the left, Bud Statton described his quest to find replacement pressed parts for the igniter for his flamethrower. He also had some amber used for polishing lenses in the raw material form.

Above, Gary Hart brought in a wheel balancer he put together. He also had two examples of Sterling engines.



In the steam engine dept, Al Polhpeter has made excellent progress on his 3X scale. This engine was first shown at the Paris exhibition in the late 1800's.

Michael Cotsifas is working on a three-stroke engine. He talked about some ideas for implementing it.



Going CCW, John Benjamin took some pictures of the milling setup he used to recreate the stripped gear for his Bridgeport. There is a close-up of the cutting blade used to form each tooth. The gear is helical so there is an added level of complexity in getting the setup right. The blue material is nylon. Next are the two gears side by side. It came out pretty good!



The gruesome-looking head is one of Sven Bonnichsen's creations. He works for an animation studio and started creating posable skeletons. There are two examples of the type of system used: brazed rod and ball bearings.

