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**Last month's meeting** was deferred with the expectation that club members would attend the Steam up offered at Brooks. And attend they did. In particular, **Karl Smith, Tom Stuart and Gary Martin** can be seen manning show booths in the pictures inside. So this is what model engineers do on their days off? Pictured with them are models they brought and in the case of Gary Martin, a full size pattern for a 5 foot flywheel. Does that pattern say "10 HP FOOS" on it? Hmmm. Several miscellaneous other pictures from the steam up are shown including one of a "What is it?" variety. This editor did poorly in identifying these items.

**Next Meeting** is scheduled for **September 11, 1:00 pm** at **Bud Statton's** and is designated as our annual picnic. See enclosed directions. Bud says people can come out as early as 9 am to help set up. If you have a pattern to ram up in a mold, come out by 10 or 11 if possible so we don't have a bottleneck. Bar-b-q lunch will be served starting at noon - \$5 minimum donation per person.

**Gears update.** **Pat Wicker** adds this note about GEARS:

The key thing is we need our members to step up and volunteer to help put the show on. We need people on Friday and Sunday who have Pick ups to pick up and deliver show props. We need people on Sat and Sun to take tickets and keep an eye on the show and answer questions and provide security. Contact Houston Gruen at [HGRUEN1@YAHOO.COM](mailto:HGRUEN1@YAHOO.COM) or 360-253-0056 to state you are available to help and he will work out the schedules with you.

### FOR THE BEGINNER # 19

Let's talk about tapers this time. There are several places tapers come into use and have to be turned or re-made. There are several pictures in my book but space limits how much I can put in the news letter.

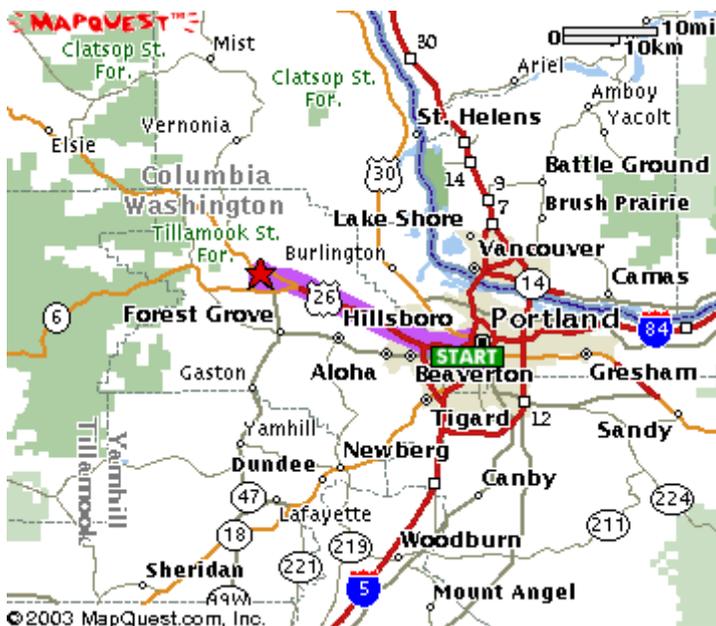
There are several methods of turning a taper on a lathe. They are the compound slide method, the offset tailstock method, and the taper attachment method, the use of a form tool, and the use of a tracer or CNC lathe. Each method has its advantages and disadvantages, so the kind of taper needed on a work piece should be the deciding factor in the selection of the method that is used.

#### The Compound Slide Method

Both internal and external short tapers can be turned on a lathe by hand feeding the compound slide. The swivel base of the compound is divided in degrees. When the compound slide is in line with the ways of the lathe, the 0 degree line will align with the index line on the cross slide, on most lathes. (Some lathes have the index 90 degree's to this. Check it out before you tell me I am not correct.) When the compound is swiveled off the index, which is parallel to the centerline of the lathe, a direct reading may be taken for the half angle or angle to the centerline of the machined part. When a taper is machined off the lathe centerline, its included angle will be twice the angle that is set on the compound. Not all lathes are indexed in this manner.

When the compound slide is aligned with the axis of the cross slide and swiveled off the index in either direction, an angle is read directly off the cross slide centerline. Since the lathe centerline is 90 degrees from the cross slide centerline, the reading on the lathe centerline index is the complementary angle. So, if the compound is set off the axis of the cross slide 14 1/2 degrees, the lathe centerline index reading is  $90 - 14 \frac{1}{2} = 75 \frac{1}{2}$  degrees.

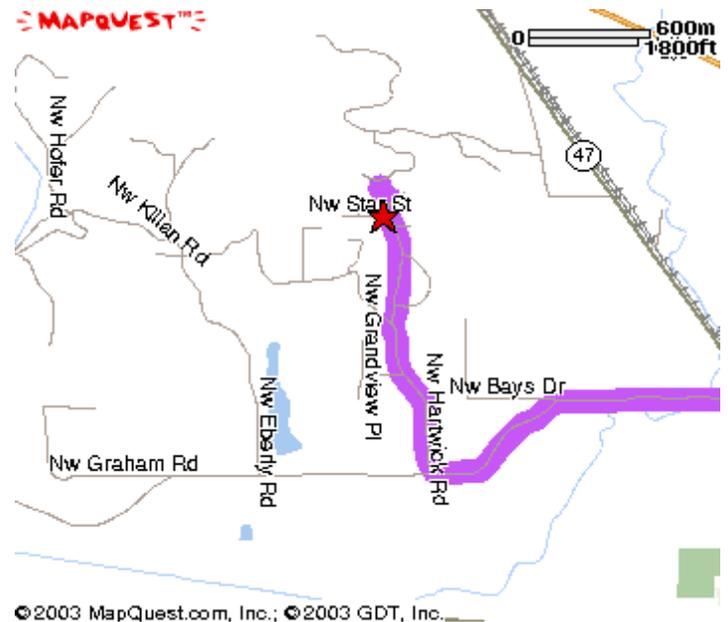
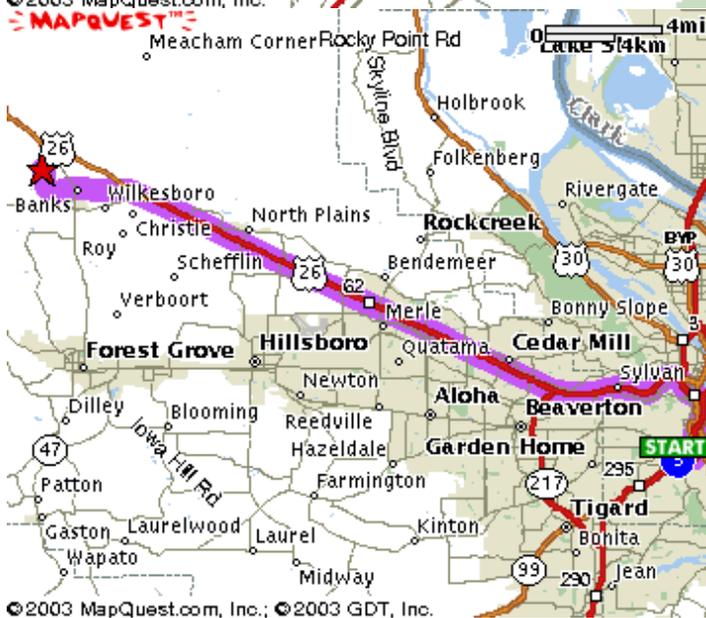
- **Wes Ramsey**



Directions to Bud Statton: (from Mapquest)  
44750 NW Star Street Banks OR 503 324-9514

- 1 On US-26 from I-405 in Portland, travel West for 21.55 miles
- 2: Turn SLIGHT LEFT onto NW BANKS RD. (At the flashing yellow light about 1 mile past Hwy 6). 1.71 miles
- 3: NW BANKS RD becomes NW CEDAR CANYON RD. 1.06 miles
- 4: Turn RIGHT onto NW HARTWICK RD. (First paved road to the right) 0.53 miles
- 5: Stay straight to go onto NW SATELLITE DR. 0.50 miles
- 6: Turn left onto Star St.
- 7: Look for melted metal, scorched lawn, wierd people.

GPS 45.630637, 123.137238 (D) or  
45 37.838, 123 8.234 (D M)



## Notices:

“Gary Martin will again be teaching his Patternmaking class through PCC Thursdays Sept 30 to Dec 9 and Woodworking Wednesdays Sept 29 to Dec 8 6-9pm. **IMPORTANT:** If you sign up before Sept 5 with a friend, the second person gets 1/2 price on tuition. If you are a senior citizen, you get tuition for half price already, so bring a junior citizen and you will both get a good deal!!! Patternmaking is listed under “Welding and Metal Work” and Woodworking is listed under “Woodworking” both in the APPLIED ARTS section.”

“Gary Martin has received the shipment of the George Thomas books “Workshop Techniques” and “The Model Engineers Workshop Manual” from England. First come, first served for those who signed up to get copies and then anyone else in the club. WT is \$44 wholesale, and has the following subjects: Making the Pillar Tool, Dividing and Graduating, Making the Dividing Head and Headstock Dividing. TMEWM is \$39 wholesale and has 28 chapters ranging from tricks of the trade to making special tools and fixtures. Both are highly recommended by Tom Hammond and other fine members of our hobby. Please send a check for the books you wish to receive to Gary Martin, Martin Model & Pattern, PO Box 19792, Portland, OR 97219 or bring the money to the club meeting. Gary wishes to apologize as he has temporarily misplaced the sign-up list and phone numbers in his office move.”



Steam Engine  
Model 10H  
Made by: Karl Smith  
Castings



