The NEMES Gazette

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The Newsletter of the New England Model Engineering Society,
Stephen C. Lovely, Editor
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From the Editor's Desk:

It's been three busy weeks since our last meeting. I'm going to plan on closing each issue of the newsletter out two weeks before the next meeting so that there will be time to get things put together and printed for the meeting. I've gotten a lot of input from people since the last issue, so this one has some real info in it. Please keep the info coming, because it takes NEWS to have a newsletter. It looks like we are going to have our first column starting soon (see the letters section.) If you've always wanted to break into print, the newsletter's your chance. You don't have to do a monthly column, anything from paragraph long tip, to a couple of thousand words on whatever model engineering subject you want to cover, it's all welcome. If we agree it's on model engineering and it'll fit, we'll make you a published author. We are also in need of someone to do an occasional CAD drawing. (If you need proof of it, look at the sketch I made of Max ben-Aaron's toolpost.) Please remember that this is your newsletter, and I can't put something in if I don't know about it, so be sure to let me know if you have an event you want mentioned.

Now that we have a newletter, we need a nice logo to put up at the top, and on the outside by the return address. If you're artistically inclined, how about taking a stab at designing a logo? I'd like to get a few candidates to publish so that you can vote on one to use. If you don't want to actually do a logo, what do you think should be on it?

How to distribute the newsletter is an issue. It'd be nice to mail them out, but that's expensive. This issue I think we're going to try handing them out to everyone at the meeting and having you put your name on a list saying that you got yours, or else checking your name on a list saying you got one. That way, if we mail them out after the meeting we know who has one and can save the cost of mailing out a second copy to someone who doesn't need it. Anyone have any ideas on how to distribute them efficiently?

As always, I want to hear from you if you have any comments on how we can make the newsletter better. You can reach me at scl@cognex.com, POBox 277 Milford, Ma. 01757, or 508-473-8621

See you at the meetings, scl

Resources:
Machines, Tools, Materials, Supplies:

Liberty Tool, Liberty Maine. It's on the main street, and there's no other store in town so it's easy to find. It's a huge old general store, four floors of 'stuff'. Lots of woodworking tools, a moderate ammount of metal. Junk in the basement, books 2nd floor, more junk and furniture on 3rd floor. Occasional lathe, Gerstner Box, ... About 4+ hours from Boston.

Hulls Cove Tool Bard, Hulls Cove ME. This is only about 200 feet from the entrance road to Acadia Nat. Park. There is a sign and it's behind a gas station/general store. Hulls Cove has mostly wood tools, a few shelves of metal stuff, but usually only measuring tools.

A third place in Maine, run by the same folks as the previous two, is Captain Tinkham's Emporium on US 1 in downtown Searsport, on the coast at the North end of Penobscott Bay.

Brothers Machinery Exchange Inc. 105 Massachusetts Ave, North Andover, Ma 01845 (508)-688-2888 Used machinery, tools, pieces of metal stock, etc. Dave Stickler says he was there recently and they seemed to have much more than the usual amount of good quality mics, calipers, etc. than he had seen there before.

Admiral Metals - Thursday afternoon from 1 to 4 in Woburn for good deals on non-ferrous metal stock. THey are right next to the big Crowne Plaza hotel - almost in it's parking lot. Aluminum is $1.50, Brass $2.00 a pound.

Brentwood Machine Rt. 125 Brentwood, N.H. approx 2 miles South of Rt. 101 the major E/W highway. I don't have a phone no. The downstairs of the main building has "stuff" plus the box type trailers lined up to the right as you face the building. "Behind" them (opposite end from the doors) is an outdoor area with rusty "stuff" by the pound or whatever they feel the traffic will bear - no bargains but sometimes you find that pulley you've been needing. He's been a dealer for years - has an auction occasionally to clean out dead inventory. Sells a variety from office furniture to some new machinery - rebuilds air compressors too. Does woodworking machinery new and used, sanding belts etc.

Leroy & Co., Inc, 567 Franklin, Worcester, Ma. 508-752-1790 It's an organized scrap dealer and will let you browse around and look for things (no kids.)

Malcolm G. Stevens, Inc., 78 Summer St., Arlington, Ma. 02174 tel. 617-648-4112, fax 617-648-9150. I stopped by to get some safety equipment so I'd have some protection if I spill some molten Aluminum or something while I'm working away in the foundry and to see what they have. In terms of foundry supplies, they seem to have all of the stuff that all the foundry books say you aren't going to be able to find without getting an enormous quantity. You might need to get a big quantity, but it wouldn't necessarily be expensive. A big bag of wood flour was only $15.00. Bill Stevens showed me around and gave me the feeling that he appreciated my business, even if I am only an individual with a small scale backyard foundry and not a big customer. If you are thinking about setting up a backyard foundry, or something bigger, this is a place you should visit.

Museums:

Charles River Museum of Industry - Our very own meeting place.

New England Museum of Wireless and Steam, 697 Tillinghast Rd., East Greenwich, RI 02818-1424, Robert Merriam, Dir. 401-884-1710 This is an all volunteer museum and is usually only open for groups or special events. Call and they will let you know when they are going to be open so you can come. $5.00 covers all the buildings.

Vintage Garage, N. Brookfield, Ma. 508-867-2892, Frank Cooke (out route 9 west of Worcester.) This is a Rolls Royce Museum and machine shop combined. A Merlin engine from a Spitfire is on display, and if you need a new engine for your Stanley Steamer they can make you one. Mr. Cooke says he's usually there on Saturday morning, and there is someone there during the week. He says he owns 3 Stanleys, or maybe they own him, and to be sure to come out and see his museum.

American Precision Museum, 196 Main St, Windsor, Vermont 05089, (802)674-5781

Books:

Rainy Day Books, Fitzwilliam NH, Frank Bequaert, 603-585-3448. Open 11-5 but not on Tuesday or Wednesday. Left on Rte 119 from Rt 12 if you are driving North away from Mass and it's the 4th house on the Left, about 1/8 mile. good selection of technical books.

Societies and Organizations:

International Stationary Steam Engine Society. Conrad Milster, Sec./Treas. 178 Emerson Place, Brooklyn, NY 11205. 718-857-9524 (home phone.) USA Editor, Robert Lindquist, Box 311, Nescopeck, Penn. 18635 717-752-2279 Their calender year starts April 1. Membership is $33/year with the annual journal, $23/year without the annual. For Seniors and Students it's $29/yr and $21/yr. All members get the quarterly publication, if you pay the extra you also get the annual publication. This society is mainly in England.

Calendar of Events:

6/6/96 June Meeting of New England Model Engineering Society at the Charles River Museum of Industry 7 to 9:30 PM

6/8-6/9/96 Maine Antique Power Assn. Skowhegan State Fairgrounds, Skowhegan, Me 207-862-2074

6/9/96 Shriner's Annual Auto Show, West Springfield, Ma 413-267-4850

6/9/96 Antique Tractor Pull and Show, Dufresne Park, Rt. 202, Granby, Ma. 413-467-9541

6/15-6/16/96 Scantic Valley Antique Engine Show, Memorial Park, Main St, Hampden, Ma 413-267-4850

6/29-6/30/96 Central Mass Steam, Gas and Machinery Association, Orange Airport, Orange, Ma 413-253-7477 or 413-253-9574

7/11/96 July Meeting of New England Model Engineering Society at the Charles River Museum of Industry 7 to 9:30 PM -- NOTE: This is the second Thursday of the Month since the first Thursday is JULY 4TH

7/14/96 Pepperell Crank Up, Town field near the rotary on Rt 111, Pepperell, Ma 508-433-5540

7/20-7/21/96 Eastern Conn Antique Auto Auction/Exchange and Show, Norwich Reg Tech High School, 590 New London Tpk, Norwich, Ct 203-376-0863

7/27/96 Old Roxbury Days, Roxbury Conn, 203-355-3384

8/1/96 August Meeting of New England Model Engineering Society at the Charles River Museum of Industry 7 to 9:30 PM

8/10-8/11/96 Straw Hollow Engine Works Club, Jct Rts 140 and 70, Boylston, Ma 508-869-2089

8/14-8/17/96 Rough & Tumble, Kinzers, Pa 717-442-4249

8/17-8/18/96 Berkshire Gas and Steam Engine Association, American Legion Field, Rt. 9, Dalton, Ma. 413-664-6758

8/17-8/18/96 Antique Marine Engine Exposition, Mystic Seaport Museum, Mystic, Ct 203-572-0711 ext 5056

9/14/96 Steamup and Engine Show at the New England Museum of Wireless and Steam. 697 Tillinghast Rd., East Greenwich, RI. 401-884-1710 There will be a 60 foot model table with a steam manifold to power up your steam powered models and the Food will be by the National Association of Power Engineers.

9/15/96 Tobacco Valley Flywheelers Gas and Steam Fall Show, Pat Kidney Field, Rt 17, Middletown, Ct. 203-667-1873

9/20-9/22/96 Cranberry Flywheelers, Bridgewater, Ma or Edaville RR, S. Carver, Ma - Exact Location not yet determined. 508-279-1483

9/21-9/22/96 New Hampshire Power of the Past / Amesbury, Powow Cove Campground, Amesbury, Ma 508-388-4022

9/28-9/29/96 Conn Antique Machinery Assoc. Fall Festival, Rt 7, 1 mile N of Kent Conn 203-227-1697

10/12/96 Conn. Antique Tractor Show and Pull, Brooklyn Fairgrounds, Rt 169, Brooklyn, Conn, 203-442-5182

The 2 May, 1996 Meeting

Karen LeBlanc, director of the Museum, told us about Innovation Expo 1996, to be held May 17, 18 and 19 at the Museum. Thirty companies will be coming to participate in what should be a fun and educational time for all. The museum is asking for 256 Volunteers to fill a four hour shift each in order to pull it off. Unfortunately, by the time you read this it will have already happened.

Max ben-Aaron did the first Show and Tell of the evening with his no packing needed tool post. It's a simple to build unit for those of us who don't have the money to buy an Aloris or one of the cheaper Aloris clones. I've included sketches of it elsewhere in the newsletter.

Roland Gaucher followed up the 1/4 scale Bently BR-2 he showed at our first meeting with a radius turning tool that fits into the cross slide of his lathe with a T-nut. He's got cardboard patterns he used to cut out the major parts, but says that since in order to get a perfect sphere the point of the tool needs to be exactly on the centerline of the lathe that unless you have the same lathe that he has you probably wouldn't be able to use them. The tool only produces a true sphere at the diameter it is set for, so when using it he checks the diameter, and when it is right he stops advancing the cross slide or he won't get a true sphere. Originally he turned it with a lever, but found that doing it that way he was not able to get a good finish on the sphere. So, he added a "wormgear" drive to swing the point around and was able to produce spheres with a good, smooth finish. He used a 60 degree flycutter set at the helix angle of a 1/2-13 thread to put 150 nicks around the outside of his gear blank and then used a 1/2-13 tap to hob the gear to it's finished dimensions. The final arrangement is a 1/2-13 screw driving the 150 tooth gear that gives the smooth advance of the bit around the sphere needed to produce a good finish. Use conventional methods to hog out most of the metal, then use the radius turning tool to finish up. The first thing I noticed about the tool when Roland unpacked it was the professional quality black oxide finish on it. He has a friend who runs a company in Worcester that specializes in doing Black Oxide. They have a $25.00 minimum, so after you've collected up a box of small parts you can take them and get them done. Black Oxide coating adds only millionths of an inch to the dimensions of the piece, so you can even do things like screw threads, and provides some amount of rust resistance. It only works on ferrous materials, and doesn't make the metal look better, just black.

Stephen Lovely talked about his experiences with Dave Gingery's Charcoal Foundry, and then tried to get interest stirred up about the Newsletter before passing out the initial issue.

Don Strang talked next. He pointed out the necessity for really knowing what you're doing before trying to get any of the electrical projects that appear in Home Shop Machinist up and running.

Norm Jones ran his 1/4 scale Ryder Erikson Hot Air Pumping engine. He made it from a set of Clarence Myers castings. There was only one error in the entire set of drawings, and he recommends the $160 set of castings highly to anyone who would like to make a similar model. He painted it using One Shot enamel, made for pinstriping, right out of the can. After doing some touch up using the paint thinned he says that it should give a good finish brushed on if it's thinned first. He had an album with a good set of construction photos, from the raw casting set on. One benefit he got from the photos is that when it came time to machine one of the castings he couldn't find it, so he looked in the picture. It wasn't there, so he knew he hadn't gotten it when he called Clarence Myers, and Clarence sent him the missing piece right away. He uses 1600 speed film with his regular shop lights for the pictures and gets good results. Last year at Wyandotte he couldn't get his engine to run. He had oil in the cylinder for lube and it was too thick so the piston had too much friction on it to move. (The clearance is .002 inches.) Since then he has gone to graphite lube. He applied it from an alcohol solution that he painted on. The alcohol evaporated and left an even coating that is thin enough to not interfere with the piston's movement. He put a propane flame on the hot end, and after a couple of minutes warmup time it started to run. Totally silent except for the water squishing through the pump.

The final talk of the night was from Harold Robinson, who is building a British Gold/Bankers Scale. It started when he found a piece of brass at a flea market and bought it because it looked familiar. It turned out to be the top fitting for a scale that he had a picture of in his files. He drew the rest of it up from the photo in the ad, and it is now a work in progress. If anyone is familiar with the details of the knife edges in a Gold Scale, let Harold know. He wants to finish it up into a properly working scale but needs to get some more info on the way that scales are put together first.

Letters to the Editor:

Something you might want to consider for the NEMESGAZ would be a list of "resources" and what the resource is likely to have. For example,I'm looking for some 3C collets. My resources would be Brentwood Machine on Rt125 in Brentwood, N.H. or Brothers Machine in N. Andover,MA. If they didn't have any, where else might I find some? I rarely go looking so I'm unfamiliar with many of the other used tooling/machinery dealers. There are also some that only frequent the flea markets.

I heard several sources for materials mentioned at our meetings - let's list them. How about castings - a foundry willing to deal with small lots, etc. Perhaps provide a list of catagories and have everyone list their favorites with addresses, phone numbers etc. Any pertinent information that might be useful.

Good luck with the Gazette, hopefully it will all come together. We certainly have a good sized group with a variety of interests. Unfortunately, I will not be able to attend Paul and Howard's gathering. Perhaps another will be held somewhere. This one could be worthy of comment in the Gazette as to number in attendence or whatever may be worthy of note.

Don Milligan, Andover,MA

Thanks for your letter. The "Resources" section is something that will definitely be a part of the newsletter. We may also do an annual of some sort that would collect up all the resources listed over the course of time and put them in a more permanent form than the monthly newsletter, but that's something for the future. scl

Steve;

I think we need a section in the news letter titled 'sources' with sub titles like scrap metal, tools, plans, etc. Use what ever words you want.

My contribution is Leroy's scrap metal in Worcester. I just bought a sheet of 3/8" AL for $1.00 a pound. The yard is very organized and he will let you browse around and look for things, no kids. He doesn't get much tooling but I saw a large pile of motors and two large vises. A closer look may turn up some gems.

Fractional HP motors are available from you local heating and plumbing contractor for free. In my town my oil company has a pile of junk behind his shop with lots of motors mounted on verious things that he has removed from customers houses. I stop by monthly and take my pick before he sends the pile on to the scrap dealer.The largest motor that I have found is 1/3 HP which is enough for the small tools that I make or restore.

I would like to pose a question to the membership. There is a company in my town that makes or supplies tubing. They have a wonderful dumpster full of odds and ends, if you need tubing. What are the ramifications of stoping in when they are not open and helping youself. Is this stealing? The yellow pages in the phone book suggest a number of other companies that may have dumpsters that could be rewarding. Has anyone approached a company to get permission to, scroung in their dumpster, with success?

_Bill, wbracket@ultranet.com (William Brackett)

Bill asks an excellent question. Does anyone know the answer? I know that I have gotten a lot of good stuff out of the dumpster where I work, but it's different if it's a dumpster that you aren't connected to. If you know, please let us know.scl

Steve- I enjoyed your casting discussion last week, (I'm the tall guy who asked you about fire clay after the meeting.)

A couple of thoughts which may or may not constitute minor news- letter items: 1) I'm still using a lathe I inherited from a friend of my father's in about 1944. It's a 10" Prentice Bros. machine, made in Worcester. I'd love to find someone who could give me a little history on this machine or its maker. 2) While I'd love to build models, so far I've been too busy maintaining and restoring steam cars. If anyone else in the group is interested in these things, it would be fun to make contact with them. I have a 1910 Stanley, and a White of the same year, both running. The latter is a much more interesting machine, what with a compound engine, monotube boiler, automatic controls, and condenser.

You've taken on a considerable task with the newsletter. You have my best wishes for its success!

Dick Wells <73240.2321@CompuServe.COM>

Dick, hopefully someone will provide us with info on your lathe. Does anyone out there have any info to provide on this old lathe? If you do have some info, would you consider writing an article for the newsletter? Paul and Howard's event was a success, maybe we could have a similar event at yourrplace where we could come and admire your two steam cars. scl

Two potential newsletter columns, with the problem of getting someone to contribute, then actually write it up....

1. HOWJA DODAT...that's what I want to attend NEMES for. To get insights into how we machinists/engineers make things. I never cease to be amazed at how many ways there are for work holding, and the myrid setups possible. I search my own dim memory when holding a weirdly shaped part to see if there is a way to fixture something.

2. FIXTURE LIST ...I have a bunch of misc fixtures and jigs which I could lend out (not give away) if someone needs such.

Jay Stryker

These are both great ideas Jay. I especially like the way you spelled the first one, because that's how I feel when I look at an especially interesting project. "How did you machine that part" just doesn't convey the right feeling. Who wants to go first on HOWJA DODAT? Write it up yourself, give me a quick outline, or show me and I'll write it up. Is there anyone out there who'd like to be the HOWJA DODAT columnist? (If you volunteer and don't like the name, you can pick your own name.) Anyone out there have any jigs or fixtures that they'd consider lending out? Anyone out there need to borrow one? Let us know, and we'll put it in the newsletter. scl

Steve

I've got a proposal for you.

I'm thinking about doing a column on 'Tools and Techniques', for the newsletter. It would explore a different, common metal working tool in each issue. It's my experience that most of us, particularly me, don't really understand all aspects of the tools we use everyday.

Take drills for instance. There are jobbers and screw machine lengths, taper length and aircraft length. There are fast spiral, slow spiral and parabolic flutes; fractional, number and alphabet sizes (and metric); Silver & Deming, and spade drills; 60-150 degree point angles and split points.They're made out of HSS, colbalt alloy, carbide tipped and solid carbide. They're forged or ground and come in a variety of surface finishes. There are also specialties like: step drills, drill/reamers, tap/drills and more.

I'd contact manufactures rep's from several companies, as well as machinists and others with knowledge to share, and distill their input into words more or less understandable to the rest of us. I'm offering to do this from a purely selfish motivation, actually. This is information, not readily available, that I would like to have myself, and this would give me the initiative and the 'credentials' to hunt it down and drag it home.

Other tool topics might include taps & dies, countersinks and counterbores, end and shell mills, solid and expansion reamers, various shapes and compositions of lathe bits, boring bars, flycutters, center/spotting drills vs combined drills/countersinks, files, grinding wheels, coated abrasives, hones and laps, polishing wheels and rouges, lubricants and cutting fluids, spindle and way oils, etc, ad infinitum.

There are a *lot* of related topics that could also be explored, including fasteners and adhesives, soldering, brazing and welding, layout and measurement, all within the context/scope of hobby work, and with a different perspective

than articles run in HSM. Their infrequent articles on these subjects tend to be overly technical and, to my mind, incomplete overviews rather than tutorials.

Perhaps someone else could write a companion article about sharpening, or techniques of using, each of the tools I describe. Most of these tools are held in a holder of some sort, eg., taps & dies, lathe bits, reamers and end/shell mills. Someone might explore the alternatives and techniques of that aspect as well. Like describing the unbridled joy of finally putting a keyless chuck on your lathe or drill press!

I've been editing a computer user group newsletter for several years and I fully appreciate the scope of work that is involved. I'm glad that you decided to take it on - I suspect from the initial issue that you've had some previous experience yourself.

I recognize that this may be putting the cart first, but membership in the society might be extended to those beyond the New England area. The computer group I belong to, although named 'The New England Sinclair QL User Group' (NESQLUG), has most of it's membership well outside of New England, in 16 states, Holland, Italy and Canada. We happen to be the only user group in the US that supports this particular model and our bi-monthly newsletter, which runs 20 pages, helps to keep everyone in touch with what's going on. We don't 'compete' with the periodicals, we supplement them by providing support in the areas they don't cove, usually the day to day, nitty gritty details that are, ultimately, more important to most users than some of the more arcane subjects often catered to in the 'mass' media.

I think that our newsletter might offer the same advantages to modelers and hobby machinists all over the US, unless there are other organizations out there, putting out newsletters, that I am unaware of. I'm not suggesting that we compete with Village Press, but the idea outlined above is something they *should* have done years ago and never did. There may well be room, and a need, for a 'user group' like us.

---------- Ed Kingsley

Ed, It's good to hear from you, and even better to hear what you have to say. If we're going to have a successful newsletter, we have to have contributors. I'd like to officially welcome you to the NEMES Gazette as our first columnist and to say that I'm looking forward to reading what you have to say about "Tools and Techniques." scl

Classified Ads:

Jim Chetwynd has heard that there is a Model Engineering or Metal Working session every Saturday night on the 80 meter Ham band. Does anyone have the details?

Wanted: 5" to 6" diameter wheel, six spokes. A water valve handwheel of this diameter would be great. The rim can be circular in cross-section. Slender spokes preferred. This is for the flywheel of a "grasshopper" type beam engine, per Model Engineer, March 31, 1949, page 383. $10 offered. Contact Jay Stryker if you have one to sell. Leave him a voice mail at 508-684-6836 or 508-658-8113, or see him at the refreshments area at the next meeting.

Don Strang (508-456-3611) is looking for a few 8mm collets to complete the set for his watchmakers lathe. He also has a 1914 Milwaukee Horizontal Milling Machine he wants to get running. He's looking for people with similar interests or machines to discuss it (and also his 1895 Gould and Eberhart Shaper) with.

Howard Evers (cohost of Paul and Howard's Excellent Event) has a 9 inch shaper for sale. It has a stand and a vice, and he'll help move it and get it set up in it's new home. It's of unknown make, but it looks an awful lot like your editor's Rhodes and the Rhodes in the Shop at the Charles River Museum. He's asking $350 for it. 508-987-0654

Tips and Hints

Thanks to Don Strang for these three tips.

Want to use Zerk fittings with oil instead of grease but have a hard time getting enough pressure on the oil to push the ball in? Heat them red and let them cool. That'll take enough of the tension out of the spring so you can get the oil in but will leave enough so that it'll still keep the ball closed with oil.

Keep the red tube from the WD-40 can curled in around the inside of the rim of the can till you need it. It may not be straight, but you'll have it.

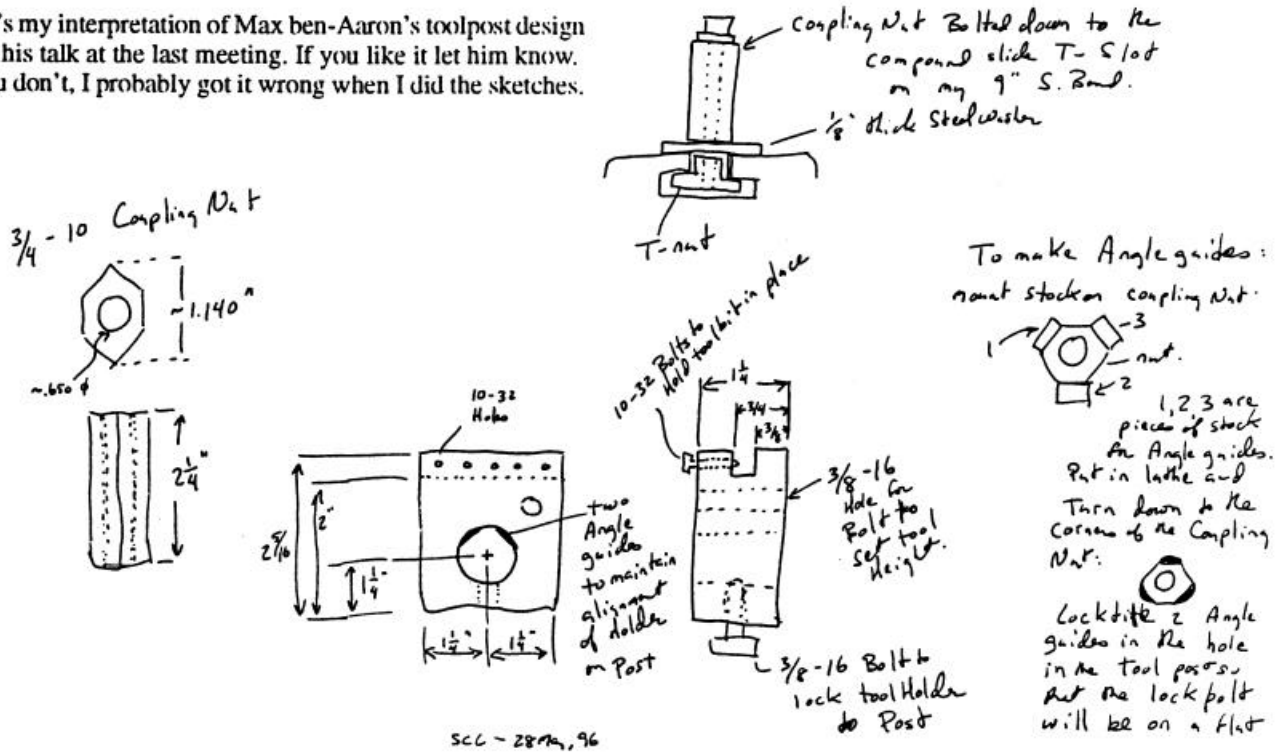
He also followed the tip in a recent ME and got the magnets out of a fridge door on his last trip to the dump. Slit the plastic gasket around the door at a corner and pull out the magnets.

Paul and Howard's Excellent Event, May 11, 1996

It didn't take as long as I thought it would to get to Paul's shop in Leominster, so I got there almost half an hour early, but I wasn't the first. I counted about eighteen happy HSM's circulating around and having a good time by three o'clock or so when Paul gave a talk on the Russian tools he has collected on his business trips to Russia in the last few years. His vernier protractor was especially interesting because it's so different from the typical American unit and at the same time so practical. Everything was really solid and seemed to be well made, if on the heavy side. Someone asked Paul what grade the tools he had were, could he have gotten a cheaper grade for less? The answer was no, they only had one quality because back when it was the USSR they had no competition and there was only one factory that made all of the micrometers for the entire country. He also showed us a fascinating combination lathe/milling machine that he had bought new and shipped back to the US via Aeroflot. Paul says he uses it for all his fussy lathe work now and enjoys working with it. He also enjoys having the only machine of it's kind so far in all of North and South America.

There was a lot of interesting material available for swapping, and the weather never did get all that bad. Everyone had a good time, and Paul was heard to say that he might consider making it an annual event.

Here's my interpretation of Max ben-Aaron's toolpost design from his talk at the last meeting. If you like it let him know. If you don't, I probably got it wrong when I did the sketches.



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