The NEMES Gazette

Vol 1 No 4
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The Newsletter of the New England Model Engineering Society,
Stephen C. Lovely, Editor
POBox 277 Milford, Ma 01757-0277

From the Editor's Desk:

Our next meeting is on August First. At our July meeting 40 people paid their dues to Joe Masciovecchio and officially became members of NEMES. Joe's going to be on vacation for the August meeting, so he won't be there to collect dues from those of you who want to pay then. If you want to pay then, please have a check made out to NEMES for $20. I'll collect them, keep a list of who paid, and send the checks to Joe so he can deposit them and mark you as paid up for the year.

Material for the newsletter has begun to come in from several of you. If you've already sent something in, thank you. If you haven't sent something in yet we'd like to hear from you.

Founder's Corner:

Our main speaker for the August 1 meeting will be Roland Gaucher with a topic I think will be of interest to all lathe users, new or with long experience. Roland is a great fan of work on the faceplate (we think he may have read to many British magazines). He will bring in several faceplates and setup tools and demonstrate the very wide range of work that can be done on a faceplate. He has developed some very interesting and unique tools and jigs for this work, including one made form a Volvo water pump bearing. He will show how to setup work to run true and balance it for smooth operation. I think this will be a most enjoyable and usefull evening.

I hope we have as good a selection of Show & Tell items for this meeting as we did last time. Lets go guy's, bring in something to show, or bring in a problem that has you stumped and see if our assembled gang has an answer.

A note on our meeting room. I have heard from several fellows that it can be very hard to hear in the back of the room. We need to work on a couple things for this. One, I will try to make sure all speakers stand up, face the group, and speak up. Two, there has been a suggestion that we move the back of the room closer to the front, by having the chairs arranged to face the side wall (an exhibit of telephone switchgear). This will make the group a bit wider, but will keep the back row closer to the front. We will try this for our next meeting.

We might have to eventually get a sound system and microphone, but these can be awkward. I know we have a couple electronics fans in the group, does anyone have a suitable small sound system we might try out?

Another suggestion is that we get some name tags. I really want to do this, since I dont know many of the members names yet (and I forget names too fast anyway). I will have some stick-on tags and markers at the next meeting, but if any of you are creative and want to come up with your own tags, please do- I think it will be much nicer if we all learn each others names.

Our treasurer reports that we had 40 members sign up and pay their dues at the last meeting. So now we are paid off for our startup costs and have money for the next several newsletters. We will eventually have to cut the mailing of this newsletter to only dues paid members, so if you are on our list but didn't pay your dues yet, see the treasurer and join us (Except Joe told me he was going on vacation in August and wouldn't be able to make the meeting) Also if you are on the list and dont want to join or get this newsletter plese send us a note so we can drop your name, no use cluttering your mail if you dont want it, and we will save the postage.

Remember the museum's STEAM EXPO- get those steam models cleaned up and ready to show for October.

Thats it for this month, see you Aug 1.

Resources:

Flea at MIT, Third Sunday of the Month from April to October. This costs $4 to get in as a buyer. It's billed as a Computer, Electronics, Ham Radio flea market, but it's where Ron Ginger picked up the nice hand scraped straight edges he had at the meeting a couple months back, so it's probably worth a visit if you're in the area. It's at the corner of Pacific and Albany in Cambridge. 9 am to 2 pm. call 617-253-3776 (9-5 M-F) for more info.

Barker Machine & Foundry Co., Box 3238, Lincoln Circle, Wayne, Maine 04284 tel (207)-6685-3066. This is where the cast iron canon barrel that Victor Klos brought to the July meeting came from. They cast aluminum, brass/bronze, and iron in the foundry. People have been asking about a source to get castings made, maybe this is it. If you contact them and learn any more, let me know about it and I'll put it in the newsletter.

The 11 July 1996 Meeting:

Ron Ginger started the meeting off with a request that people think about a logo for NEMES. The Museum is having a Steam Expo in the Fall that they want to be a strictly steam event. We should put some sort of an exhibit together, maybe with a brochure and a banner and some model steam equipment. He mentioned the letter in the latest HSM that refers to NEMES. He also presented Joe Masciovecchio with a Logan Lathe Mug since Joe had talked at the last meeting about his Logan Lathe restoration project.

Errol Groff lead off the show and tell section of the meeting with a book that has been talked about previously. He had a copy of "Foundations of Mechanical Accuracy" from the Moore Specialty Tool Co. He also talked about the 5th annual RC Model Submarine Regatta to be held at the Groton Sub base July 27 and 28. It's probably to late to make it if you're reading about it here, but it sparked some good discussion and is an annual event.

Don Strang talked next. He says that if you want to do some scraping Moore Tools book is great. He had a drawing for a drill grinder. There have been lots of articles in ME on drill grinding, and in 1903 there was a complete analysis of all the motions needed to properly sharpen a drill. Everything has to be at exactly the right angle to do it correctly, and it's not the angle found on most modern drill grinders.

Where do you go to learn about the tricks and gimmicks? He recommended Lindsay Publications. Also the "American Machinist" which came out once a week beginning in 1884. It had lots of interesting and useful info for the home machinist up until 1925 when it got glitzy and began to have a lot less of interest to the small operator. How does one go about becoming a machinist today? Find old books and read. He recommended the ICS Books as being the best, and recommended Joshua Rose, an author from the turn of the century.

He showed George Thomas's retractible tool holder for threading, and said that he can provide drawings for it if anyone is interested.

He visited Leroy's Junk Yard in Worcester and found it disappointing - Reisers is 5 times as large. The Worcester Tool Factory is a surplus tool place worth visiting because you never know what you'll see. Be careful though because the pricing is erratic.

As a parting question, he wants to know exactly what the term "Laydown Threading" is all about. This seems to be the latest buzz word in the carbide tool catalogs for external threading.

Kay Fisher brought in his canon. It was made from plans in "The Home Machinists Handbook" from Sherline. It was just the right size to set in the palm of your hand to admire, and was about as big as Kay said was practical to make on a Sherline sized lathe. Another book he recommended is "The Model Engineers Workshop Manual" by George Thomas. He says anyone should get a lot out of it. It's from Tee Publishing in England. He says that if you call them on the phone they will get the books right out to you. This started a discussion where someone said that Tee makes a shipment to the US once a month, so depending on where you order in the month the service might seem really good or really bad. That brought up Enco, where the consensus was that you should never buy anything from them that's on back order. (Kay sent me a letter with a bunch of book recommendations after the meeting, see the letters section.)

Dave Stickler brought in his twin cylinder 1 con rod "no dead center" engine. It has two rotary valves that run off of one eccentric. He made it from a $200 casting set that he got from Paul Jacob's in Toledo, Ohio. It looked very nice, and had a nice wooden base for his wife who thinks that a project has to have some woodwork if it's going to be displayed in the house. His verdict, the plans are good, and the castings are okay but not great. He had to modify some of the dimensions slightly to get the castings to work. He mentioned "Trustee from the Toolroom" and the consensus was that the pattern for the Trustee was Edgar T. Westbury, one of the authors for ME.

Ed Kingsley told about "The Tool Shed." It's on Rt 20 not very far from the Museum and is open Wed to Sat from 1 to 5 PM. He asked how many people might be interested in stopping in before the meeting if he could get them to stay open an extra hour or so one Thursday a month. Quite a few people were interested.

Henry Szostek passed around an aluminum alternator cover with a Polish Eagle engraved on it. It all started when he decided to restore a Junak motorcylce from Poland. It's a 350CC 4 stroke single that was made from about 1956 to 1965 or so. After he got another one for parts he built it up to about 630CC so that it would go, and needed a better electrical system. Then he needed an alternator cover that didn't have a Japanese name on it. Since he says he's never been good at the artistic engraving stuff he needed a way to provide himself with some guidance. He uses white paint and carbon paper to get the design onto the piece of metal, then uses a graver to cut out the black lines. Go carefully, use a graver, and you'll get good results. Take the paint off when you've got the lines cut, and you've got a nice engraving. He's done it on aluminum and brass, but hasn't tried steel yet. It's a real selling point for a brass canon to have the family name and crest engraved on the barrel.

Victor Klos showed the Iron Cannon barrel he had bought at a show a while back, both because it was in keeping with all the recent talk about cannons and also because people had been asking if anyone knew of a foundry where you could get castings made for projects. He had some sheets to pass around with the info on Barker Machine & Foundry Co. in Wayne Maine. (see the Resources Section) He also mentioned a movie Colonial Williamsburg did about 30 years ago. It ends up with the maker engraving his name on the top of the barrel, going tap tap tap with a little hammer and graver, making nice freehand letters. A couple people said they'd seen it recently on public television, and that when it comes on it's worth watching.

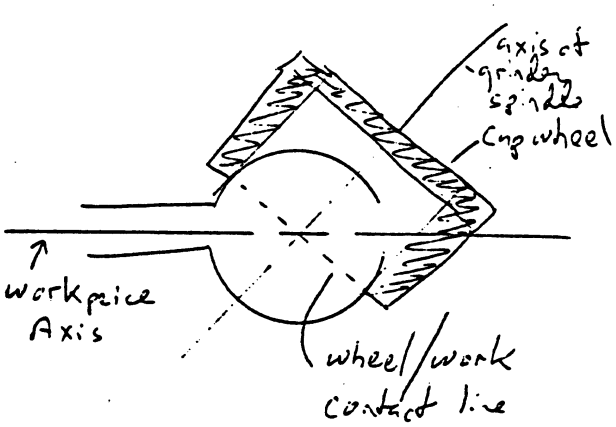
Wayne Singer brought in his model of Phil Duclos's Six Cycle Oddball engine. He said that it was a gratifying project, but not all that difficult. The governor might be tough for a beginner though. Right away, somebody asked what the extra two strokes were. The answer is that there are two exhaust strokes before you have an intake stroke. That comes out to: intake, compression, power, exhaust, dead

stroke - piston goes down, exhaust valve is open, second exhaust stroke. It's a hit and miss engine and running with no load at 1300 rpm it sounds like it's barely going. If he disconnects the governor it'll go about 3000 RPM. To show how the governor works he used his finger to put a load on the flywheel and the engine started to fire more regularly while running at about the same speed. Since it's a hit and miss type engine the flywheels do the work between the power strokes. On this one the ignition fires every power stroke, but the engine only fires when the governor let's the exhaust valve close so that the vacuum of the intake stroke can pull the intake valve open and let fresh mixture into the cylinder.

It runs on gasoline, has cup lube to the bearings, and a needle valve to adjust the drip of oil into the cylinder. Duclos made a self ejecting crank to start it, but Wayne thought that was a little bit scary so he made his with a one-way clutch. When he started it he palmed the flywheel and it started right up.

He made his own cast iron rings for it, using the procedure outlined by Phil Duclos in the instructions. He annealed them sealed in nitrogen and it worked real well. Duclos suggests packing them in cast iron chips that you get from a garage that turns brake drums. The chips will keep the oxygen in the air from getting at your rings and scaling them up.

Edward Mann saw the info on how to machine spheres on a Bridgeport in the last newsle tter and told how to generate a sphere by grinding, so that you could make a hardened sphere. Start with a flat metal baseplate and add a work spindle parallel to the plate. Then add a second spindle for the grinding wheel, at an angle from the first spindle, at the same height from and parallel to the base plate. Bring the cup wheel in to the sphere until it just begins to cut the top of the sphere. With two rotary motions in the same plane, if the grinding marks are equal, the ball will be a true sphere over the portion that is ground. Nearly complete spheres can be made this way. See the sketch for a better idea of this. The ID of the cup will be the OD of the ground sphere.



Roland Gaucher brought in a couple of lathe accessories. The first is an attachment for letting you cut an infinite number of different pitches on your lathe. He'd had the info on the gadget from an article in ME Workshop that Ron had lent him, but hadn't gotten around to making it because the design as shown wouldn't have fit his lathe very well, and even though it was a neat gadget, he didn't really need it for anything.

Then the fire department asked him to make an adaptor to go from the faucet in the fire house to 2" fire hose. It turns out that the standard thread for fire hose connectors is 7 1/2 per inch. Rolands lathe won't cut a 7 1/2 per inch thread, so he had to make the gadget. It's a block that sits between the cross slide and the compound slide on his lathe, with a lever sticking out to the right that moves the compound from side to side as it's moved. A pin on the lever rides in a guide as the apron moves along the bed of the lathe. With a straight guide set at an angle (like a taper attachment) you can adjust the pitch of the screw you are cutting to me more or less than the thread that would be cut if the lathe was set up normally.

To cut the 7 1/2 pitch thread he made a magic marker reference line on the lathe chuck, turned the chuck 7 1/2 turns, and measured how far the cutting tool moved with a dial indicator to see if the tool moved 1 inch like it was supposed to. The tool as he built it has about a 4" travel. It's like a taper attachment, only it moves the tool parallel to the bed instead of across the bed the way that a taper attachment does. You could easily use it for a longer distance than 4" by making the guide longer. This sort of an attachment would be good for metric threads.

To match the pitch from a nut, run it over wood to get something that you can measure the pitch of. This is useful if you need to make parts to fit something like an old wagon where nothing is standard.
To fit two pieces of tube together, go to a muffler shop. They'll have a hydraulic swaging machine that will expand one piece to go over the other or neck down one to fit in the other.

Roland also brought his Aloris clone toolpost. It's the piston version and the actual brand is Suzuki. It's the same as Aloris and is at least as good quality. The piston version like he has will put the tool back within a thousandth of where it was when you took it off, so the diameter will be within 2 Mils. The wedge version will do some better, but it also costs more.

The featured speaker for the evening was Paul Budlong of Littleton Mass, who is retired from Raytheon. He brought the two models he has built with him. The first is Elmer's Engine. It's a two cylinder wobbler that he made using a file, a drill press, and a scraper. He says building Elmer's Engine taught him that you can get really good results with hand tools if you just take the time to do it right. His second model, finished the morning of the meeting just in time to pack to bring to show us, is Bill Harris's 1 1/2" scale Steam Roller from Live Steam Magazine. (It's now available as a booklet from them for $10.)

He got support from two groups that he highly recommends, the Ham Net, which is mostly people from the Illinois Live Steamers, and the EAA (Experimental Aircraft Association.)

On a trip to the midwest he found one of the people he talks to on the Radio by stopping at the police station and asking for "Dennis who makes steam engines." They found him, and he had a very nice visit. One of the things he likes about the EAA is that in each area they have people who are the local group's instructor/expert on various areas of airplane construction, and they are introduced at each meeting. He got help, advice, and even a rivet gun from his EAA friends that helped him to do such a nice job on the rivets on his roller.

This is the roller's first showing. It has a two cylinder engine with a reversing lever and a water pump to feed the boiler from the water tank. There's a gauge for the water level, and a pressure gauge to show the steam pressure.

The boiler is made of 1/4" steel, and was pressure tested the day before the meeting. It has one small leak still that Paul says he can take care of. The first time he tested it it leaked badly, so he sent it to little engines to be welded. Now there is only a single tiny leak. The flues are copper. The first time that he expanded the tubes into the tube sheets they leaked, so he got on the radio and talked to Chicago. Now he expands them with a slotted collar with a taper on the inside. Bang them with a hammer and they seal good. (Run a rod of some sort inside the flue so that the hammer blow is against a solid backing and not the flue.) The boiler has a steel shell and copper tubes. If there is a next time he's going to solder the tubes in after he expands them. There are 8 tubes in the boiler of "N" copper tubing.

For the water tank he fell back on his EAA connections. He borrowed a rivet gun, got a head made to fit it to match the rivets he was using and it worked great. He had to be sure that each rivet was just right, because he was doing it with airplane people and they insist that each rivet be perfect. He demonstrated how he used cleco's to hold the pieces in line while he drilled the rivet holes and got it all ready to assemble. A cleco is a sort of a spring loaded rivet substitute so you can keep all the holes lined up perfectly as you continue to work on riveted assemblies and parts. He riveted the tank up tight, then sealed it with Locktite PST, which is what he's used on all his model's fittings. Growing up in Minnesota he learned that there were four things to standby in Life. Drive a Ford, Shoot a Winchester, seal things up with Permatex Number 2, and vote the straight Scandinavian ticket. Now he knows that Scandinavian politicians are still politicians so you can't trust them, and he uses loctite, so he figures he still has faith in half of what he learned growing up and that's pretty good.

He needed small wrenchs to put it together. People told him to get ignition wrenches, but he couldn't find any good ones. Finally he got an 1/8" wrench from Coles in California. It was marked "PROTO" and is great.

It's built to the plans, but he added a flywheel.

He's started building a Steam Engine now, and find's interactions with the dealer is as much fun as making the model. His advice is to get all of the prints from the dealer before you start. His locomotive is going to be ten feet long, in Great Northern configuration with the air pumps on the smoke box door where they belong (after all, he did grow up in Minnesota.) The prints for the Roller were excellent, but he needed to add detents for forward, neutral, and reverse on the valve gear.

Somebody asked him how much time it took him to make it. The answer is lot's, and if you need to add it up you probably shouldn't be doing it. He has a 9" South Bend lathe, an Enco drill press, and a Bridgeport that he used to make all the parts except the sector gears, which he made at an evening course.

It's a nicely designed model that he enjoyed building. He tested the boiler hydrostatically to 210-220 lbs and in use it'll run 100-125 psi, although he doesn't expect that he'll steam it up all that often because he figures it'll be messy and take a lot of cleanup after.

He spray painted it right out of the can, and would love to hear a presentation on painting and striping.

He's got four good sources of information on model building. EAA, the Ham Net, NEMES, and a card file index. He's putting down who talked on what at meetings and such so that when he needs something answered he'll know the person to call and ask, along with the sources of supplies and such that get brought up at the meetings.

In case your wondering which Winchester along with Henry, it's a Model 94 in .25/35.

Calendar of Events:

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

8/1/96August 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

8/23-8/25 Waushakum Live Steamers annual meet. Last Meet at Norfolk Street Track. 370 Norfolk St., Holliston, Ma. 3 1/2" and 4 3/4" gauges. 617-893-3892, ask for Mike B

8/24-8/25 Conncticut River Antique Kollectors (CRAK) Doug Dricsoll 802-333-3243

9/5/96 September Meeting of New England Model Engineering Society at the Charles River Museum of Industry 7 to 9:30 PM

9/7-9/8 Granite State Steam and Gas, Dublin NH, Bart Cushing 603-358-0104

9/14/96 Yankee Steam-Up at the New England Wireless and Steam Museum, 697 Tillinghast Rd, East Greenwich, RI 401-884-1710

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, Edaville RR, S. Carver, Ma - Dave Moore 508-279-1483, Dave Robie 617-335-5322

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

10/3/96 October Meeting of New England Model Engineering Society at the Charles River Museum of Industry 7 to 9:30 PM

10/5-6/96 The Great New England Steam Expo, at our very own meeting place, The Charles River Museum of Industry. This one has everything from steam toys to a 12 ton Steam Roller. This should be a real good time, and is a chance to show our support for the Museum, who generously allows us to use it as a meeting place. Pick up a flyer at the meeting with all the details.

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

Tools and Techniques

by Ed Kingsley

KEYLESS CHUCKS - A Review

About 15 years ago, I bought an Albrecht, Keyless Chuck, at a flea market, for a most modest sum. It was a small one - with only a 3/16" capacity. I used it several times over that same period and always marvelled at it's smoothness and accuracy. With the asking prices for the larger 'Albrecht' chucks, even on sale, I never seriously considered I'd ever own a 'real', full sized, keyless chuck.

Several months ago, I began machining more seriously, and I very quickly recognized how limiting a keyed chuck can be, especially when you need to spot, center-drill, drill and tap a large number of holes. (Okay, *one* hole!) Getting the most accuracy from a keyed chuck requires inserting the key and tightening the chuck sequentially in all three of the key positions. This can be a "SLOW and 'painfull' process" especially when repeated several times.

ENCO (a 4 letter acronym that spells 'bad news' in several languages) sent me a sales flier (they actually do have a regular catalog) offering a 1/2" capacity keyless chuck for $39. I checked in several other (more 'legitimate') catalogs and a few offered what looked like the same chuck for about $60. The descriptions in the other catalogs said something like, "good value for the money", so I took a chance and bought one.

I hate to exaggerate, but next to my 6" Mitutoyu Dial Caliper, keyless chucks are now the last pieces of equipment I'd ever want to be without. I don't want to praise ENCO, by any means, (ask me about the 14 month back order), but this chuck WAS *OK*. I was impressed enough that I ordered another 1/2" chuck for my lathe, and a 3/8" chuck for my milling machine.

I can't honestly say that these chucks are more accurate than the Jacob's (keyed chucks) that came with my Rockwell drill press, but without any doubt they are so much easier to use, that accuracy *almost* doesn't count. Given the ease of use, I would gladly accomodate a 'thou or two', but I haven't noticed any runout with the 1/2" ENCO chucks.

The 3/8" ENCO chuck I bought was constructed a bit differently from the 1/2" chuck and had a bit of 'slop', but I found a 5/16" Metabo Chuck, offered by "Grand Tool", for $27.50, and bought one. This is a German chuck, and possibly an even better value than the ENCO (Chinese?) chuck. (The "Grand Tool" chuck(s) are still on sale and include 1/2" capacity models at similar cost.)

What I would like to communicate in this article, is the enormous advantage of keyless chucks. They're generally more accurate than their keyed bretheren, (and much more convenient) and, if you watch the sales, - quite affordable.

Life is full of little 'intangible things', which often exert an amazing influence in our lives. For me, keyless chucks are one of them. They have made my life "longer", by making the routine/tedious drilling we all have to endure, more accurate and, in a lot of cases, almost fun.

I presently have one on my drill press, one on my lathe and another on my milling machine. That's three for me and, if you haven't experienced one, do pleasure yourself (we have but one life ....) and try one (or three).

You're worth it, even if your wife has doubts.

Tinkering with Steam Cars

by Dick Wells

I'm one of those folks who reads a lot about mechanical models, has most of the necessary tools, and being a retired ancient, has lots of time. But I've never made a mechanical model - at least not since I was a kid. Why not? I've spent all my shop time allowance on the restoration of my two antique steam cars - a 1910 White and a Stanley of the same year. A couple of projects will illustrate the kinds of things one can get into.

To start at the 'blacksmithing' end of the spectrum: the Stanley needed a new superheater. This is basically a piece of 1/2" pipe approximately 10' long sitting right in the hottest part of the fire. Stanley made these of ordinary steel tubing; they didn't live long, especially if the operator was careless and overheated them - something very difficult to avoid in the firing-up process. I decided that this was going to be the

last superheater I made for this car, and so decided to make it out of Sched. 40 stainless 1/2" pipe. This material has an O.D. of .840" and a wall of .109". The main fabrication problem is apparent when you consider that the required 10' has to fit within a cylinder 20" in diameter and about 2" high. To make matters more interesting, my metallurgical 'consultant' told me that I should bend it cold.

I live in the woods, and had just been clearing some land for a new septic system, I left the stump of a good-sized oak cut off at a height of perhaps 4', and with enough room around it to swing my 20' length of pipe. I chain-sawed an appropriate notch in the stump, slid a 10' length of 2" pipe over my workpiece, and made the bend at the inside of the spiral, (see the accompanying sketch). Next, I cut a 1 1/2" long slice from an 8" diameter oak log, and fitted it with notched 2"x4"s on either side, to create a 'form' around which to wrap the main part of the device. This I spiked to an old railroad tie, which in turn I staked down in the middle of the lawn. Back to work with my length of 2" pipe; pretty soon I had my superheater, except for the last bend. I'd planned on introducing hardwood spacers between adjacent coils as I wrapped the pipe, but found that the material had enough spring so that when tension was relaxed, I got the spacing I wanted. On the last bend, I'll admit to cheating: out came the acetylene torch, and in 2 minutes I was done. I probably have 4000 miles on the superheater so far, and it's holding up fine.

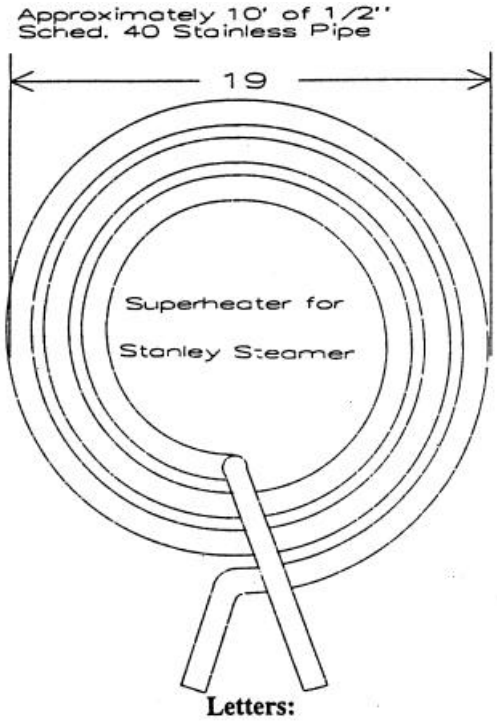
There's also some fussy work to be done on these cars. The White has an amazing all-mechanical control system which includes a device for measuring feed-water flow, (interesting problem, at 550-600 psi). I needed to make a new part for this, which consists essentially of a brass rod about 5" long and .141" in diameter. The problems were two: the rod has to have a very smooth finish, and must be perfectly cylindrical, as it has to operate in a packing gland with very low friction, yet sealed against those same 550-600 psi pressures. And at one end, it needed a female thread which had 56 threads per inch, and a diameter between 2 and 3.

First, the problem of a smooth and uniform O.D. : I turned the diameter to within perhaps .0005" using a follower rest. Then I made a lead lap, which consisted of a disk about 2" in diameter with a 9/64" hole through the center. A slot was cut, the plane of which included the axis of the hole, and which ran from one edge of the disk to within about 1/2" of the opposite edge. A hole was drilled along a chord close to the open end of the slot and perpendicular to it, and a screw and nut installed which would allow me to close the slot (and hole). Starting with 180 grit, and turning the lathe at a low speed, the lap was worked back and forth on the rod until uniform resistance was felt over the length of the rod. At that stage, one needs a more precise tool than a micrometer to detect any variations in diameter. Then progressively finer grits were used to get the desired finish, ending up with 600.

I missed my desired final diameter by a few tenths, but that wasn't a critical dimension, since the packing can accomodate quite large variations, as long as the rod is cylindrical.

Lapping is time consuming, but the accuracy and finish which can be obtained is really amazing.

Now to that weird thread: fortunately, it only had to be about 1/2" deep, so I used 2-56 taps to create a starting point. Then I made a "2 1/2"-56 tap from drill rod, which I used to finish the trhread. Thank heavens it was in brass! So far, the rod is working well. It's scheduled for a 900 mile tour of the Adirondacks in August, so it'll get a good test shortly.



Letters:

Here is some input for the next news letter. Please feed free to ignore it or modify it in any way that you wish.

During the last show and tell there was quite a bit of interest about the two books that I brought. Several fellows wanted details on ordering and some asked the prices - which I couldn't remember at the time.

Anyway I have kept a database (of sorts) with price and detailed reviews. My detailed reviews amount to a rating from 1-10 :-)

Anyway here is a copy of my HSM book list including some out of print and others on my wish list.

Out of Print

Dividing and Graduating by Geo. H. Thomas #14.99
Milling for the Model Engineer by S. Bray #14.99
Simple Workshop Projects by Stan Bray #6.99

Wish List

Models in Bottles by R.F.C. Bartley #4.95
Model Sailing Ships Fittings by E. W. Hobbs #3.95
Model Steamer Fittings by E. W. Hobbs #3.95

Introducing Model Traction Engine Construction by John Haini #6.95

The Quorn Universal Tool & Cutter Grinder by Prof D. H. Chad #10.95

Scale Model Traction Engine Building Featuring “Minnie” by L #11.95

Machinery for Model Steamers by Percival Marshall #3.95

Working With Sheet Metal by Dave Gingery Lindsay Publicatio $8.95

Build Delux Machine Shop Accessories by Dave Gingery Lindsa $9.95

Have, (these are rated from 1-10, with 10 being the best)

Making Small Workshop Tools by Stan Bray #6.95 Rt. 2

Rob Roy & William by Martin Evans #9.95 Rt. 5

Building the Allchin by W. J. Hughes #11.95 Rt.5

Model Steam Locomotives by Martin Evans #13.95 Rt. 5

The Live Steam Book by LBSC (expanded “Shop Shed & Road”) #11.95 Rt. 5

The Locomotive Simply Explained by Chas S. Lake #3.95 Rt. 3

Sharpening Small Tools by Duplex #5.95 Rt. 3

Vertical Milling in the home Workshop by Arnold Throp #6.50 Rt. 5

The Model Engineers Workshop Manual by Geo. H. Thomas $19.95 Rt. 10

Popular Mechanics Lathe Handbook No. 1 1925 Lindsay Pub # Rt. 5

The Care and Operation of a Lathe By Sheldon Machine Co. Lindsay Pub Rt. 5

The Amateur’s Lathe by L.H. Sparey $8.50 Rt. 9

The Machinist’s Handbook by Doug Briney Rt. 8

Myford Series 7 Manual by Ian Bradley $9.95 Rt. 9

Audels Machinist and Tool Makers Handy Book Rt. 7

Machinery’s Handbook 24th Edition $46.66 Rt. 4

Machinery’s Handbook Guide 24th Edition $10.00 Rt. 2

Machinest’s Bedside Reader by Guy Lautard $16.95 Rt. 9

Machinest’s Second Bedside Reader by Guy Lautard $21.95 Rt. 8

Machinest’s Third Bedside Reader by Guy Lautard $25.95 Rt. 7

Machine Tool Reconditioning by E. F. Connley #29.95 Rt. 7

There was reluctance amongst some members to order anything from England. As I said at the meeting I have had good luck dealing with several English firms both in terms of good products and good delivery.

Just a bit about dialing England on the phone. I’m not an expert so someone correct me if I’m wrong but it goes like this.

If an English firm published a phone number that starts with a Zero you should remove the zero and substitute a One in it’s place (unless the next number is already a One.

In addition to this you should prefix the whole number with 011 44 which I believe says “011” international dialing and “44” country code for England.

Anyway for instance TEE Publishing whos catalogue of books I am looking at right now lists their address and phone number as:

TEE Publishing The Fosse, Fosse Way Radford Semele, Leamington Spa, Warwickshire CV31 1XN England Tel: 01926 614101 Fax: 01926 614293

So to call TEE Publishing I dial I use 011 44 1926 614101

Anyway - when ever I get it wrong I just call the Operator and they usually help me thru the difficulty. Once you get thru in the phone the rest is easy.

I would strongly advise anybody interested in HSM type books to call TEE Publishing and ask for a Catalogue. It is free and only costs you the phone call. Try it - you’ll be glad you did. They don’t have part numbers or anything, if you know the approximate title of the book and/or the Author they can help you in a minute. Remember it’s 5 hours later over there and you don’t want to pay a long distance call to leave a message so call when you first get up.

Here’s another hot number. If you like live steam locomotives call Reeves at 011 44 121 779 6831 (dial exactly as shown I already converted the number) and ask for their catalogue. This will cost you about $5.00 but you will find it fascinating reading.

Kay R. Fisher

Thanks for the letter Kay, I know that I’m always interested in info on good books. If any of you have any books that you want to recommend to the rest of us, or maybe warn the rest of us about, send us a book review and share the info.

Classified Ads:

Howard Evers -508-987-0654- He needs someone who can do a small gold plating job.

For Sale, Mini Lathe - $400 This is the same lathe currently sold by Harbour Freight for $489.00 and by ENCO for much more. I paid around $800 a couple of years ago. It comes with two sets of change gears (nylon and steel) and some tooling. Dual variable speed: 30 to 1100 and 400 to 3000. 7” swing over bed, 3.9” swing over cross slide. Spindle bore 3/4” Tailstock taper MT2 Cross slide travel, 2-5/8”, compound rest travel 2-5/16”, 3/4 HP 110 volt 1 phase motor, 18 threads from 12 to 52, reversable, 3 Jaw chuck. Only been used 10 or 20 hours. Kay R. Fisher, 80 Fryeville Rd., Orange, Ma 01364 (508)575-0663 (home) or (508)493-4319 (work)

9” South Bend Precision Lathe on South Bend Cabinet base, quick change gears, 4 1/2 ft bed, Buck Bros. 3 jaw chuck, face plate, many tool holders, BB live center, Jacobs tailstock chuck, South Bend Steady Rest. $1100. L.V. Klos, 289 High St. Newburyport. work 508-282-2628, home 508-465-1960

Late breaking news in a letter from Ed Kingsley:
THE TOOL SHED

The “Tool Shed” is a business in Waltham that sells used hand and power tools. It is normally only open between 1 and 5 PM, Wednesday through Saturday. I have tried to drop in before the NEMES meetings, but I usually get there about 15 minutes before they close - very frustrating. Before the July meeting, I spoke to the owner about the possibility of his staying open later, once a month, on our meeting nights. I said I’d ask around at the meeting and see what kind of interest there might be. I did, and most of those present indicated that they were interested.

I contacted the owner and he has agreed to keep the store open until 6:15 PM, on Thursday, August 1st. If there is a good turnout, he’ll continue to do it. There is a good mix of ‘general’ and machinist oriented tools, with lots of “Anything In This Box For $X”, type bins. I’ve found the prices to be reasonable and I’ve never left even close to emptyhanded. I encourage you all to check it out.

The “Tool Shed” is located at 471 Main Street (on Route 20), about 2 blocks beyond the Waltham Common, as you head East (away from 128). It’s on the left, after you pass “Wilson’s Diner”, and across the street from a liquor store. There is parking adjacent to the liquor store. Telephone is (617) 647-7970.

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

This is a good chance for us to get to THE TOOL SHED. I’ve seen their ads, but getting to Waltham when they were open would have meant a special trip, so I’ve never been. I’m planning on heading for the meeting a little bit earlier than usual this time so I can stop in and see what they have.

The NEMES Gazette

c/o Stephen C. Lovely

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