

The NEMES Gazette

NEW ENGLAND MODEL ENGINEERING SOCIETY INC.

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Editor's Desk

Mike Boucher

Hi folks,

Sometimes I envy those of you who aren't sports fans. I'm still coming down off the excitement and stress the Red Sox put me through, although I must admit I wish they were still playing!

It's been a while since I gave an update on my new shop, and that's mainly due to a lack of progress. But, hopefully by the time you read this, the wiring will be done.

My neighbor is planning on coming over after work on Wednesday, Oct 29th, to install the 125 amp subpanel for the shop. I've purchased all the materials. All we need to do is hook it up and I can start connecting the circuits to the subpanel.

It will be nice to have outlets on the walls that actually work, as opposed to plugging everything in through one power strip and running extensions cords across the floor.

Continued on Page 2

Next Meeting

Thursday, Nov 6, 2003

7:00 PM. Meetings held at:
Charles River Museum of Industry
154 Moody Street
Waltham, Massachusetts

Membership Info

Annual dues of \$25 for the calendar year.

Please make checks payable to NEMES and send to our treasurer.

Missing a Gazette? Send mail or email to our publisher.

Addresses are in the left column.

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Since it's been "extension cord city" in the basement, most of the machines haven't been used. I've drilled a few holes with the drill press and used the lathe to cut down a few chunks of brass, but other than that, nothing.

I have managed to get the drywall up on the "other" side of the shop wall, so the rest of the basement will have a semi-finished look. I still need to purchase the planks I'm going to use on the "shop" side of the wall. I'll do that before the outlets on the wall are live. There's no sense having exposed live wires!

Hopefully I'll have photos of the new shop soon...

However, even with no progress on the shop, the jobs around the house are slowly getting done. I've built, stained, and hung up several sets of shelving, and the lawn was looking good until it was covered with wet leaves. Guess what I'll be doing this weekend?

C'ya
Mike



President's Corner

Norm Jones

The Meeting

Our speaker for the November meeting will be Al Goldberg. Al will give a slide show with comments on the municipal water pumps of the High Service Building at Chestnut Hill. Three of the four existing pumps are steam powered, sidelined by the Quabbin Reservoir in the 1960's, and last operated in 1974. Al will also give a short summary of the current status of the engines, and the plans the State has to dispose of the site to a private developer.

Wright B Flyer Replica

A Wright B Flyer Replica was one of the featured aircraft at WPI's Fly In at Worcester Regional Airport on Saturday October 11th.

The "Vin Fiz" recreation was built by Wright Recreations located in Limerick Maine in 2000. Cal Rodgers became the first person ever to cross North America when he flew the Vin Fiz from Sheephead Bay, NY to Long Beach, CA in

84 days. The aircraft did manage to get airborne on Saturday for a short period of time even though the flying conditions were less than ideal. It was quite a sight to see!

Yankee Steam Up Review

Saturday, October 4th proved to be a rather dismal day weather-wise, but managed to bring out one of the largest and most enthusiastic spectator crowds that I have ever seen at The New England Wireless and Steam Museum in East Greenwich RI.

I once again had the pleasure of Frank Stauffer's company under the "canopy". Both of our Rider Ericsson engine models proved to be a popular display. I gave out all of the 30 or so copies (CAD drawn) of "How to Make Hero's Fountain" that I had brought with me that day. Sure beats sketching it out by hand as I have been doing all summer.

I purchased yet another casting set that day as well. This time I had arranged to meet Dave Hamblin there, as I had seen his display featuring a hydraulic ram model at the Connecticut Antique Machinery Association show in Kent, CT back on Sept 27th. The plan is to incorporate Dave's hydraulic ram along with a hand pump (yet another casting set already in my inventory) with the Rider Ericsson/Mery combination. You can get more info on the Hydraulic Ram casting sets from Dave at: daveandmuskpuppy@msn.com

Bill Schoppe Out and About

I received two phone calls after the West Deering, NH antique machinery show on October 14th from friends advising me that Bill was present there and having a great time. Having spoken with him myself, I also found out that he and Cindy are planning to go to the APM Model Show in Windsor VT on November 1 and 2. Glad to hear that you are making a speedy recovery Bill!

Cabin Fever Expo Trip

Once again it is time to plan for our annual trip to the Cabin Fever Expo. The dates this coming year are January 17th and 18th, 2004 in York, PA. We will be travelling to York on Friday, Jan 16th and returning on Sunday evening January 18th.

A block of 35 rooms have been reserved for January 16th and 17th at the Holiday Inn on Arsenal Rd. Note that this is not the same Holiday Inn that we stayed at last year. Each

person must call (717) 845-5671 to reserve a room. Make sure that you let them know that you are with NEMES to receive the rate of \$59.00 plus tax per night. Our block of rooms will be reserved until December 16th.

Once again, please remember that this is the only hotel that the bus will be stopping at!

I know this is difficult to ask, but if you are driving down on your own, please do NOT reserve one of those rooms! Since this is the only hotel the bus is stopping at, we need to hold those rooms for those who are taking the bus.

I am also pursuing the option of having a buffet ready for us upon arrival on Friday night. I'll have more information on this soon. Please keep in mind that we are not having a meeting on January 1st. There are only two meeting (Nov and Dec) to get all the details worked out.

See you on November 6

Norm



The Meeting

Max ben-Aaron

President's Comments

The Venerable Norm Jones opened the October meeting of NEMES in the Jackson Room of the Charles River Museum of Science and Industry.

There was a 'Leadership meeting' just before the meeting where we discussed a possible donation to Museum, of a sum in the neighborhood of \$1000.

In response to a question from the floor, Treasurer Rob McDougall reported that the Club treasury has \$7000 in hand. He added that he thought that we ought to contemplate reducing the membership dues to \$20. Comments from the floor indicated that the extra \$5 did not appear to make the dues unaffordable for any members

and we should think twice before making reductions.

A motion, made by Jim Chetwynd Jr., to make a donation to the Museum, was seconded and passed unanimously. A second motion to the amount of \$1000 was also passed unanimously, on condition that the disposition of the funds would be discussed with Dan Yeager, the Museum's director.

Venerable President Norm Jones proposed "a vote of thanks to Ed Rogers for organizing yet another successful Club appearance at the annual North Shore Old Car Club meeting at Topsfield. The attending crowd thronged the display. We look forward to doing it again next year."

The regular January meeting date falls on New Year's Day next year. There was a question about should we try to have a meeting or not. By unanimous consent it was decided that we would skip the January meeting this time.

Norm said that it is time to start organizing for the trip to the Cabin Fever Show next January, the 17th and 18th to be exact. Plans will be made at the November and December meetings. Last year, Norm was approached by a representative from a local Holiday Inn, offering us what may be a better deal. It is likely that reservations would be made at that Holiday Inn, instead of the "official show" hotel. One of the incentives offered was to have a buffet dinner for us on for the evening of arrival.

Norm was approached by Gil Greenberg, who needed a belt for his 9" South Bend. He asked me for suggestions. Norm also has a 9" South Bend and when he needed a belt he went to McMaster Carr <http://www.mcmaster.com> Several members mentioned other belting sources. One was Kaye, in Concord NH. They charge \$20 for a complete belt.

Show and Tell

On the subject of belting, Rollie Gaucher stepped up to the podium to tell us that he needed a strange belt for a dental drill he had just rescued from the town dump. He went to his usual supplier, Hudson Belt in Worcester, who provided him with a plastic belt that was welded to the exact length needed. It was better than the original. Rollie added that Hudson was the

largest Gates' distributor around. They knew all there was to know about belts and could supply or make a belt for any conceivable purpose. The company, which has been in Worcester since 1850, is still owned and operated by the same family. Jim Paquette provided their address and telephone number:

Hudson Belting
85 East Worcester Street
Worcester, MA 01604
(508) 756-0090

Jim also showed a plate with three cut-outs, intended for a model steam engine. He had it cut out with a water jet. The cutting left smooth edges and hardly any perceptible draft. It was quite inexpensive -- less than \$10. The cutting was done by:

Daryl Plantinga
Apex Machine
610 Quaker Street
Northbridge, MA 01534
Phone (508) 234-1360 Fax (508) 234-1336

Jeff del Papa said that he had some experience with water jet cutting and that the draft, for thick pieces, could be appreciable.

Errol Groff told of a young student of his, who had come with him to Rollie Gaucher's shindig a couple of years ago. This youngster had an unfortunate auto accident and was laid up in hospital, badly injured. A motion to send him some flowers in the hospital was approved.

Frank Dorion showed an inspection mirror that has a built-in prism that reverses the image so print reads without being reversed. He also showed an ingenious home-made height gauge made from a pair of calipers, by cutting one arm short and brazing it to a base.

Mike Boucher brought a fitted wooden box that he made for the safe transport of his Stuart #1 model steam engine.

Last meeting, Dennis Norden asked for advice about getting a roll-pin out of a blind hole. Many valuable suggestions were offered. He now reports that he did an in-depth inspection. Fortunately, under a layer of gunk, there was a through-hole that made the removal of the pin easy.

Springfield Armory

Jim Paquette brought attention to tours of the Springfield Armory, which take place daily at 10:30 a.m., 1:00 p.m. and 3:00 p.m. About 60% of the exhibits are on the second floor, not normally part of the tour, but special tours of the second floor can be arranged for groups if scheduled ahead. Scheduled tours are run several times each weekend at a cost of \$12 per person. Advance booking by phone is recommended as they are generally full. Private, group tours can be arranged by contacting the Armory. Norm Jones has information on both the regularly scheduled tours and also on arranging private tours. The cost for group tours is the actual cost of paying the Park Personnel for the time allotted.

Jim Paquette also said that he saw a 7" Ammco shaper at the Kent Show, offered for \$1100. It disappeared, so he presumed that it had been sold. He has a couple of shapers for sale. See his ad in this Gazette.

When Good Threads Go Bad

In his auto shop, Rollie Goucher is often called upon to deal with equipment in which threaded objects have resisted all efforts to remove them. This month, he described some of the specialty tools he uses to solve the problems. He "complained", in his good-natured way, "I get all the worst ones, the ones that nobody else can do. In my experience, each tough problem is unique. No two are alike."

Last month, in Show & Tell, Rollie amused us with the tale of the lug-nut on a Dodge Caravan, that he had been asked to remove. This month, he brought the tapered bushing that he made to guide the end mill that he used to gingerly mill the nut off the stud. He also added graphic gory detail to the story.

"The lug nut had a cheap sheet-metal sleeve over it to make it look like an acorn nut. Attempts to remove it had resulted in all the corners of the hex rounded off and then somebody had attacked it with a chisel and, by the time it came into my shop, it no longer resembled any kind of nut whatsoever. The chisel attack had failed because there was no way to angle the chisel in the recess to provide torque that would turn the nut. There was also no way to get into the recess with a

torch, because of the risk of damaging the aluminum wheel.”

“The owner of the car had neglected the brakes to the point that the rotors had been ground completely away, probably because he could not remove the offending lug nut. He was now backed into a corner -- he had to have the lug nut removed because he had no brakes at all left. To add insult to injury, he just wanted the nut removed -- he would replace the brakes himself.”

Rollie said, “I noticed that the recess had some draft, so I measured the taper with my verniers. I measured the diameter at the outside and then the diameter at the depth of the vernier’s ears. This gave me the taper (about 2 degrees) over the length of the ears. I went to my shop and turned an aluminum bushing with a ½” central hole and an outside taper to match the recess. I had a short nondescript ½” end-mill, with only about ¾” of flute still remaining, that I touched up on my surface grinder. This jig was just the thing to do the job. Spun with a slow-speed drill, the end mill, fed in slowly, spot-faced the nut and stud until all traces of the nut were gone. The wheel could then be removed and the old stud could be punched out and a new stud installed. I charged \$100 for replacing the stud, based on the time taken; the car’s owner didn’t need to replace a \$400 wheel so he was happy.”

Rollie brought an assortment of special tools that he uses to handle recalcitrant cases. One unique set, made by Myers, is designed to remove the special key-operated lug nuts that are supposed to protect expensive alloy wheels or fancy hub-caps from being stolen. Each wheel has one keyed lug-nut and there is supposed to be a special key supplied with the car to remove it. Every one is different. They are hardened and tapered on purpose so you can’t put vise-grips on them. Often the owner of the car (especially the second owner) has no idea where the key is, especially in GM cars that use these keyed lugs to retain their fancy hub-caps. Ford wires the key to the lug wrench. The Myers tools have a hardened, slightly tapered recess in the socket. It is driven onto the lug-nut, with a brass hammer, with enough force for the socket to bite and allow the nut to be removed with a wrench on the ‘socket’. This is a ‘desperation-tool’ and Rollie said he is always surprised that it works as well as it does.

The ‘sockets’ in this set have different tapers. They are glass-hard. He has “really whaled” on some of them and has never broken one. Sometimes they slip, but you hammer them on again and eventually they work. Some tools for the same purpose have a left-hand spiral forged into the socket. This tool is double-ended; the appropriate end is driven on with a sledgehammer.

These tools all work. The reason he has so many is that there is not one of them that is 100% reliable for every application. One tool may work well in one application, but may fail on the next; it may keep slipping because the angles are not quite exact. But, once driven on, a big breaker bar takes care of even the most obstinate lug nut, although he did have one case that defeated him.

Rollie told the story, “A wheel on a big pick-up truck had a nut that simply would not budge, even using these special tools. So we laid a regular ¾” nut over the end of the offending lug nut and my mechanic Bob (who has a steadier hand and a better eye than me) took the MIG welder and established an arc on the lug nut through the hole of the nut, and weaved his way out, welding it to the inside of the hex nut. Then we put a socket on the hex nut and backed it right out.”

Often, good threads go bad and it’s not anyone’s fault. There is not much you can do. When removing a spark plug, sometimes it comes out hard. You curse and apply penetrating oil and it keeps galling. You try going in a bit and it goes in as hard as coming out, but at that point you are committed and have to continue. When the plug is finally out, the aluminum is welded into the thread and the hole is a real mess.

For situations like this, Rollie has a special German tool. It has a 14 mm tap that locates the tool in what’s left of the thread so that the second part, a built-in oversized tap, can cut a new thread in the block. The new oversized thread is in line with the hole so an insert can be installed to provide a new thread for holding a replacement plug. The first part of the tap is just to get you started, and the larger diameter second part taps all the way through.

The insert is a sleeve with the oversized thread outside and a regular 14 mm thread inside with a small shoulder on the top. A special tool is used to install the insert. There is also a spot-facing

tool; it fits over the tap and is nothing more than a tube with two gears to drive it. In the very likely event that the new thread is not quite square to the existing hole, the plug will not seat properly unless this tool spot-faces the surface square.

The installation tool looks almost like a forming tap. It has four high spots on it. You can't see them but you can feel them. The inside thread of the insert has only a partial thread for the last thread, so the tool will catch on it and propel the insert into the prepared threaded hole. When the shoulder hits at the top, it can't go in any more, so if you continue driving it in, if the insert is of the right length, the forming tool takes the last thread and causes it to swell out at the end, very much like you would peen a rivet, and it locks the insert into the cylinder block. When you back the tool out the insert stays in because it is flared on the inside and has the shoulder on the outside, locking the insert in.

The disadvantage of this process is that the second thread on the insert can act like a heat dam between the plug and the block. Heat transmission is important because the cooling of the plug is critically dependent on heat flowing from the tip of the spark plug, through the threads to the block and on to the cooling system. Even having to install an insert may upset the cooling of the plug because the extra thread outside the insert interferes with the heat flow to the block, and the tip of the plug will run hotter. In the worst case, you get detonation because the tip never cools and acts like a glow plug. Some manufacturers use a tapered plug seat because it improves the heat transmission from the plug body to the block.

Rollie says, "If you can go 100,000 miles without changing spark plugs, there is a good chance that the plugs will never be replaced. If maintenance of plugs has been delayed too long (i.e. until the electrodes on the plug have completely disintegrated), the hex portion of the plug can actually have its diameter reduced by corrosion to the point that when force is applied to remove the plug, it breaks right off. The porcelain part comes out but the thread and the body of the plug will remain in the engine block. Snowplow trucks seem especially prone to this disease because of the salt thrown up, which collects in the plug recess and corrodes the steel plug body."

"If the porcelain part does not come out by itself, it can be blown out using the engine's compression -- you start the engine and get out of the way! You can get plug bodies like this out with some sort of easy-out because there is a hole there already; it is the hole where the porcelain insulator used to be."

"I have had good luck with these" Rollie said, showing a set of the most common easy-outs, which are basically square-section rods with a left-hand spiral.

Sometimes, when removing a lug-nut, it galls and tears the thread. If it is not too bad, the threads can be restored with a split die tool. Rollie explained, "You put the die on a good part of the thread, close the die, and use a socket to back the die off and pick up the original thread and straighten it out. The hard part of getting a die started is to get it started straight in the right thread, and if you don't, you are just going to add to the problem. Putting the split die over the good thread and working out is an elegant solution to this problem." Rollie has a set of these, in metric and inch, in the most popular sizes.

In some mild cases, all you might need is a thread file to touch up a thread. Rollie brought two examples that could handle just about any thread you might come across. Metric thread files should be available as well.

Rollie often performs an autopsy on the part once the job is done. He told the story of a bad spark-plug that was misfiring. He took it home, put it in the lathe and turned the metal part off to find a tiny crack in the porcelain where the spark was shorting to ground. He knew the plug was the problem because the misfiring stopped when a new plug was put in, and he never would have known what was wrong without doing this.

Rollie said that he always wants to know why an electric fuel-pump goes bad. They are sealed units, crimped together so you have to peel the crimp off to open it. Inside there is a little electric motor with permanent magnets, a tiny armature, and two brushes on the end. Typically what he finds is that the brushes have worn right through the commutator. In some of them there is a space between two impellers and the two little ears that drive the second impeller have broken off, so the pump can't provide the pressure needed. Occasionally he finds one that is so out

of balance to start with that the bearings go bad. One time, he found a feed pump, from a gas tank, that hadn't worked from day one. The brushes were completely unworn because they had never touched the commutator at all, yet the car had done 100,000 miles, running on one pump, and they never knew it!

Rollie showed an interesting tool that might give you some ideas. It touches up a damaged spark-plug hole. It consists of a tube with a spark-plug thread. Down the middle is a tapered pin, and it is fluted. To use it, you thread it into the spark-plug hole all the way to the bottom. Then expand it by pulling the tapered pin up, and as you wind it out, it cleans the thread. Using it is tricky because you need to get it seated precisely - you don't want to cut the thread oversize. It says on the tool: 'Hand tool only!' Rollie couldn't imagine putting an impact wrench on it. It's an expensive tool, but if it saves a job, it's worth the price.

Most dealers make no attempt to fix anything; they simply replace parts. But Rollie's clientele is different and he often has to fix parts. Years ago, you could get a kit to fix almost anything, such as an overhaul kit for a fuel pump or a carburetor. No more. Today, the fuel pump is in the gas tank. You can't get a repair kit for a water pump any more. But what we have to be careful about when fixing things is to avoid opening a new can of worms that had best be left unopened.

Rollie explained, "Some of the worst parts to fix are frozen studs in exhaust manifolds, when all that is left is a little nub sticking out. My brother came up with an ingenious idea to help in these cases. We put a pair of square-jaw vise-grips in a bucket of ice water and then, with a rosebud tip on the torch we heat the manifold and stud till they glow. Then, we grip the stud with the vise-grips from the end and squeeze a couple of flats on the stud. When we do this, the heat drains out into the vise-grips and the stud contracts. The combination of pre-heating and stud-cooling usually works. I admit that I scoffed when I first heard the idea, but it really does work!"

Rollie had another tool that works pretty well to dress larger threads. But it wouldn't work for smaller threads like a 10-32. It has two straight pieces, one of them serrated, so that it will cut into the damaged portion of the thread, and a roller. You put it over the stud, put tension on it and

back it off to reform the thread. It is not a new tool - it has been around for years, and it works.

When trying to get a screw or stud out, your chances of success depends on how the thread failed. If the head of a bolt shears off, and you have to use an easy-out, you will be trying to get the bolt out with a tool that has less surface area than the head. Your chances of success are slim because you have already lost the best way of propelling that thread out, the head of the screw.

Sometimes, using an easy-out, you push and it will not come out, and you are faced with a dilemma: do you push harder and risk breaking the easy-out? Rollie showed a Snap-On (actually Blue-Point) easy-out that has a weak spot so if it breaks, it will leave enough sticking out that you can grab it to remove it, so you are not stuck with a broken easy-out in your hole.

If you ever need to get a bolt or screw out by drilling, put the part in a drill press or milling machine. You don't have much chance of getting the drill exactly centered in the shaft by hand, and no matter how skilled you are you are never going to drill a hole as straight as a machine. Rollie said, "When I have the whole part, I can put it in my milling machine and I mill the broken part flat so the drill does not wander when I start. Finding the true center can be confusing because of the way the thread terminates, so I set up my wiggler a bit off center to sweep around and find the true center. I then center drill it and drill it. I drill as big as I can without damaging the thread. Whenever you can, drill all the way through, because that helps to relieve some of the tension that is causing it to lock."

Rollie had jobs handed to him with a broken tap, crooked, half-way into the original thread. When he goes to engine shows, he buys carbide drills, which he can sharpen with his diamond wheel. He drills out the tap with these drills, sharpening the carbide drill when necessary, until the center of the tap is drilled out. If the thread is crooked, he makes a little sleeve to repair it.

Another kind of easy-out looks like it has a dull acme thread, with a taper on it, so it pulls itself in. The teeth are blunt so that it can't cut a thread, so it starts backing the thread out. Rollie has some easy-outs that are double-threaded -- both right hand and left hand.

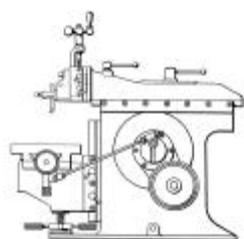
To get a stud out, Rollie showed a double-ended tool that has left-hand tapered inside female splines in each end -- two sizes. You screw it on the stud and then you can back the stud out.

Installing a stud can be done using double nuts with one tightened against the other, but there is a special tool designed specifically for installing studs. It has a spring clutch and 3 rollers so that it grips the stud without deforming it. A 5/16 hex forged on the end allows a wrench to be used to torque the stud.

Rollie concluded, "These are some of the tools and methods I use to deal with the problems I get. I never seem to get the easy ones. The ones I get are frozen in there, rusted in there, cross-threaded in there, a broken drill, or a broken tap. That's the kind of stuff I have to deal with. So I have many tools. There are many different types and they all work pretty well within their limitations. Over the years I have found the some work better than others."

Max concludes, "I tried very hard, but I must confess that I could not capture the unique flavor of Rollie's talk. It can't be done. It loses in the translation. You had to be there..."

Max



Shaper Column

Kay Fisher

Shaper of the month

This month's shaper is a 7-inch South Bend that has been refurbished by Marti Escarcega on commission for his friend and club member George Glines. Their club web site is www.valleymetal.org.

All this info is available on Marti's excellent web site at:

www.members.cox.net/escarcega/metal/metal.html.

I have spent quite a bit of time at this web site because in addition to his shaper coverage he has great documentation on his refurbishment of a Bridgeport J-head mill. As I have been in the middle of refurbishing my M-head for over a year

(counting a move across country), I found his information to be both inspirational and educational. The following is from Marti's web site:

"This is a late model South Bend shaper with an oil pump. Overall condition before refurbishing was good and the machine was pretty complete. The shaper had about seven layers of paint on it as did the cabinet. The machine and cabinet came from two different sources. I used aircraft stripper on the cabinet and then sandblasted it."



Before

photo by Marti Escarcega



Nearly Completed

photo by Marti Escarcega



Before

photo by Marti Escarcega



Partially Disassembled

photo by Marti Escarcega



Nearly Completed

photo by Marti Escarcega



Parts is parts

photo by Marti Escarcega



Sandblasted & painted

photo by Marti Escarcega



Restored worn tags

photo by Marti Escarcega



Completed Right Side

photo by Marti Escarcega



Completed Left Side

photo by Marti Escarcega

Thanks Marti and George for that refurbish information and pictures.

My mailing address is:

Kay R. Fisher
101 N. 38th St. #129
Mesa, AZ 85205

My e-mail address is:

KayFisher@att.net

Kay



Treasurer's Report

Rob McDougall

As of 9/30/03

Balance as of: 7/31/03	\$6,952.92
July Interest Income	.58
August Interest Income	.55
<u>Less</u>	
July Gazette expense	-189.01
Speaker Honorarium	-50.00
August Gazette expense	-204.37
Balance as of: 9/30/03	\$6,510.67

Dues for 2004

As I mentioned at the last meeting, the club Treasury is well funded and I have proposed reducing the dues for next year to \$20.00. This will be voted upon at next month's meeting. We have spent around \$1,000 less than budgeted this year after the elimination of door security and fewer guest speaker fees.

Collection of Dues

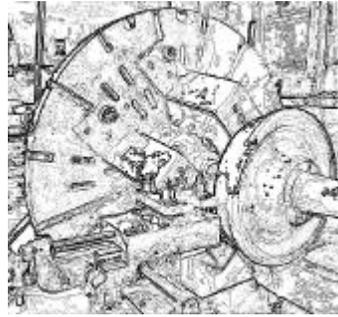
I would like to repeat last year's method of putting out a box at the January meeting for members to drop their dues check into. If you wish to pay by cash, **PLEASE PLACE THE CASH IN A SELF ADDRESSED ENVELOPE – THANK YOU.**

[Editor's note: Due to New Years Day being the first Thursday of January, there will not be a January meeting. Maybe Rob will have the box at the December and February meetings?]

Cabin Fever Trip

I am also now collecting the bus fare for Cabin Fever (estimated at \$62.00).

Rob



Shop Hints

Compiled by
Mike Boucher

Cleaning Jacobs Chucks

By Bob Beecroft

You just never know what good fortune may come your way!

Recently, I had the good fortune to come across a 0-1/2" Jacobs chuck free for the taking. Not the high-zoot ball-bearing one, but who's to complain? The best part is that it came attached to a Moore Boring machine taper. The taper is in very nice condition. Moore tools are available new...starting at \$300 each...and \$350 for the "precision" ones!! I had purchased several Moore collets from a particular gentleman, and he phoned me to ask if it was OK to send the chuck along with the other items. Well, YES! He told me it was sticky, and couldn't sell it that way, so opted to just get rid of it this way. Lucky me!

It came, and indeed was sticky. I did some research on the Internet, and found an excellent resource:

<http://www.grm.net/~shlosser/jacobs.htm>

Take a look there. You'll see good photos and a detailed description of how to go about it.

I made a tool to take a Jacobs chuck apart. One end ID fits the rear skirt to press the insides out. The other end ID fits the geared end to press it back together. This piece of tube has been languishing in the drawer for about 30 some years - its prior life was to pound on it with a big hammer on auto front ends. I worked for Sears when I first got out of the service, and it was one of the front end tools I bought/collected/made. You never know when something will be useful, though it's usually right after it gets tossed!



Jacobs chuck, Moore taper, and the tools to disassemble the chuck
Bob Beecroft photo

I found a piece of stringy swarf inside the chuck. It galled one part from being ground around inside. The swarf looked like a piece of thin wire. Repair was more involved than just getting the swarf out. There were also some burs in the channel for one of the jaws. I spent some time repairing it with a diamond bit, then I honed each of them, since I was cleaning up one of them anyway.

This was the first time I've ever pulled one of these down...any chuck for that matter. Now the jaws just drop in place. I pressed it back together, and dry, the shell spins smoothly to open and close. It operates as if it were new.

I oiled it up, replaced the Moore shank, and I'm good to go.



Disassembled Jacobs chuck
Bob Beecroft photo

Bob



Department of Corrections

In the October issue of the Gazette, there was a "Happy New Year" paragraph from Max ben-Aron. As printed, it read "I would like to take this opportunity to wish all members of NEMES (even those who are uncircumcised heathens) a happy, healthy and prosperous New Year"

This is not what Max wrote, it is what the editor changed it to. Max's original statement was "uncircumscribed heathens".

I apologize to Max for the error, and apologize to any NEMES members who took offense.

Mike



For Sale

WANTED, 2VB Hardinge Inserts

For Bridgeport 'H' head, 2VB Hardinge inserts, including the following:

- ?? 2VB collet with 1/2-in ID
- ?? a 2VB holder with a socket to accept the 2MT shank of an Albrecht drilling chuck
- ?? 2VB holders, with setscrew, for 3/8-in shank dia, and for other shank diameters, endmills.

Marty Feldman
Owl's Head, ME
(207) 596-7266

"Laundry Type" steam boiler

Laundry type vertical steam boiler. 49" tall with cone X 9" diameter, 14 1/4" firetubes. Last hydroed at 200 lbs, drained, never hooked up. Rivet construction, has try cocks and sight glass. Excellent shape. Can burn propane, coal charcoal even wood with right grate. Includes hand lever feed pump. \$300.



Also - a hot water stack heater in excellent shape, enclosed, it uses a kerosene pot burner and gravity tank. It's great for a summer camp. \$75

Send SASE for pictures.

Dave Robie
559 Pleasant St
So Weymouth MA
(781) 335-5322

9" South Bend Lathe

9" South Bend Model A, bench lathe with quick Change Gearbox, 4 foot bed, travel dial on compound, threaded spindle. Bench included.

Accessories:

- ?? 5 inch, 3 jaw, universal chuck
- ?? 6 inch, 4 jaw independent chuck
- ?? Face plate
- ?? Fixed steady rest
- ?? Rocker tool post, 3 tool bit holders, 1 knurling tool
- ?? 3 Lathe dogs, various sizes
- ?? Assorted tool bits
- ?? Draw Bar with 3c collets. Collet Sizes, 1/32, 1/16, 3/32, 1/8, 5/32, 3/16, 7/32, 1/4, 9/32, 5/16, 11/32, 3/8, 13/32, 7/16, 15/32, 1/2, and 3/16, 1/4, 5/16, 3/8 Square collets
- ?? Morse dead center, #2 taper

- ?? Aloris tool post set including the following; AXA quick change tool post with AXA 1 tool holder, (3) AXA2 tool holders, AXA 7 tool holder, and AXA 41 boring bar holder
- ?? Various adapters for holder to hold boring bars
- ?? 1 live center, #2 morse taper
- ?? 1 Drill chuck

Price \$800

Bob McLaughlin
Stratham NH.
(603) 772-2633
email bob@taylorriverclockworks.com

Shapers

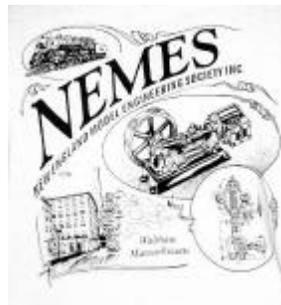
Two inexpensive Shapers - 1 Logan and 1 Atlas, both running, both need cleanup and painting. \$299.00 each

Jim Paquette
(508) 278-2203
email toolman@cape.com

Shaper Work CD

Put out in 1944 by the New York State education Department this 326 page manual is chock full of valuable tips and information on using the King of Machine tools....The Shaper. Covered is everything you need to know about the care and feeding of the shaper, use of the shaper, even how to sharpen tools for the shaper. Scanned and saved in Adobe Acrobat format. \$5.00 shipping included.

Errol Groff
180 Middle Road
Preston, CT 06365 8206
errol.groff@snet.net



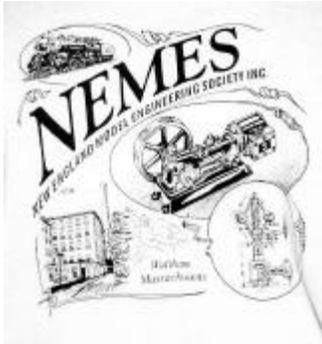
NEMES clothing

NEMES Tee Shirts

NEMES tee shirts are available in sizes from S to XXXL. These are gray short sleeve shirts, Hanes 50-50. You won't shrink this shirt! Artwork by Richard Sabol, printed on front and back.

Extra-Large tee shirts are now **OUT OF STOCK!**
 If you're interested, let us know so we can judge
 if/when to reorder. All other sizes are available.

Artwork:



Rear



Front

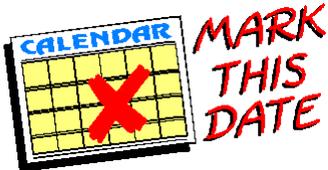
Prices:

S - L \$12.00
 XXL \$14.00
 XXXL \$15.00

Add \$5 shipping and handling for the first shirt, \$1
 for each additional shirt shipped to the same
 address

Profits go to the club treasury.

Mike Boucher
 10 May's Field Rd
 Lunenburg, MA 01462-1263
mdbouch@hotmail.com



Upcoming Events

Bill Brackett

To add an event, please send a brief description,
 time, place and a contact person to call for further
 information to Bill Brackett at wbracket@rcn.com
 or (508) 393-6290.

Nov 1-2 - Fourth Annual Model Engineering Exhibition

196 Main Street, Windsor, Vermont
 American Precision Museum, Windsor, VT
 (802) 674-5781

<http://www.americanprecision.org/>

Nov 6 - NEMES Monthly club meeting

7PM - Charles River Museum of Industry,
 Waltham, MA (781) 893-5410

Dec 4 - NEMES Monthly club meeting

7PM - Charles River Museum of Industry,
 Waltham, MA (781) 893-5410

Jan 17-18 - Cabin Fever Expo

York, PA. Gary Schoenly (800) 789-5068
www.cabinfeverexpo.com

Bill



Web Sites of Interest

New type of constant velocity joint.

Here's an ingenious new Australian invention: by
 fitting two Cardan joints, one inside the other, they
 have achieved a constant velocity coupling
 without any sliding surfaces.

<http://www.cvcoupling.com>

BTW – if you don't know what a Cardan joint is,
 it's a simple universal joint, like they used to use
 in the driveshafts of cars!

Cleaning Jacobs Chucks

Bob Beecroft sent along this link to an excellent
 resource for info about cleaning out a Jacobs
 Chuck. Good photos and a detailed description of
 how to go about it.

<http://www.grm.net/~shlosser/jacobs.htm>