

# The NEMES Gazette

NEW ENGLAND MODEL ENGINEERING SOCIETY INC.

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## Gazette Staff

Editor Mike Boucher  
Publisher Bob Neidorff  
Events Editor Bill Brackett  
Meeting Notes Max ben-Aaron

## NEMES officers

President Norm Jones  
Vice Pres. Steve Cushman  
Treasurer Rob McDougall  
Secretary John Wasser  
Director Mike Boucher

## NEMES web site

<http://www.NewEnglandModelEngineeringSociety.org>

## Contact Addresses

Mike Boucher, Editor  
10 Mays Field Rd  
Lunenburg, MA 01462-1263  
[Mdbouch@hotmail.com](mailto:Mdbouch@hotmail.com)

Norm Jones, President  
28 Locust Rd,  
Chelmsford, MA 01824  
(978) 256-9268

Rob McDougall, Treasurer  
357 Crescent Street  
Waltham, MA 02453  
[RCMcDougall@attbi.com](mailto:RCMcDougall@attbi.com)

Bob Neidorff, Publisher  
39 Stowell Road  
Bedford, NH 03110  
[Neidorff@ti.com](mailto:Neidorff@ti.com)

Bill Brackett, Event Editor  
29 East Main St  
Northborough MA 01532  
[wbracket@rcn.com](mailto:wbracket@rcn.com)



## Editor's Desk

Mike Boucher

Hi folks,

When I start working on a Gazette, the first thing I do is update the date above, in the footers on each page, and the date of the next meeting. This time, I had to change not only the month, but also the year.

Wow, how time flies.

It seems like it was just yesterday I was moving into my house, and that's been almost a year and a half. I've celebrated my first wedding anniversary, and Christmas is but 3 days away. (and my shopping is finished!)

A few years ago, we noticed that there was a shift in the type of presents that were being exchanged in my family. The "kids" were getting practical items, and my parents were getting "toys"! Quite a shift from when I was younger.

So, I've tried to shift the balance back to "toys", at least for me! My

Continued on Page 2

## Next Meeting

**No January meeting!**  
**Thursday, Feb 5, 2004**

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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Christmas wish list was mainly made of up of items for two of my main hobbies: toy trains and machine shop work! It drives my wife nuts!

Asking for tooling may be pushing the definition of "toy", but its what makes me happy, and that is one of the definitions of "toy". Socks or underwear may be practical, but when I look at my Starrett "Last Word" indicator, I'll always remember that my parents gave it to me one Christmas a few years ago, and that makes it much more than just a tool.

So, here's wishing everyone a Merry Christmas and a Happy New Year! And here's hoping the only people who get coal in their stockings are those who would burn it in their live steamers!

C'ya  
Mike



## ***President's Corner***

Norm Jones

### ***It's a Small World!***

This evening (Dec 17<sup>th</sup>), I had the pleasure of meeting a fellow that many of you who are associated with the Waushakum Live Steamers probably already know. His name is Mike McClure.

Being enthusiastic about Model Engineering, I talk about it with anyone who I think might be interested! A few weeks ago I brought my "miser" stirling engine to work, along with one of my photo albums. One of my coworkers, Dan Thompson, mentioned that I might be interested in meeting his neighbor, Mike McClure. He suggested that we share similar interests. Dan was right on the mark!

Mike is President of Railroad Supply Company in Nashua, New Hampshire, and has been building 1 1/2" scale live steam locomotives for a number of years. Needless to say, he has a great shop, which I noted, includes a shaper. He was quick to say that although it doesn't get a lot of use, there are certain operations that it is uniquely suited for.

I learned over the course of our conversation that we share similar acquaintances as well as

sources for various items and services. It was a very enjoyable visit.

I am looking forward to seeing Mike at Waushakum's annual New Years Day get-together. It is truly a small world!

### ***No Meeting for January***

Remember that there is no meeting on New Years Day, January 1<sup>st</sup>. See you at either Waushakum on Jan 1 or on the Cabin Fever Bus Trip on January 16<sup>th</sup>.

Norm



## ***The Meeting***

Max ben-Aaron

Venerable President Norm Jones opened the December meeting in the Jackson Room of the Museum by welcoming new member Dick Sedgwick, from New Hampshire and others present for the first time.

Norm made the statement: "I had a look at the model display downstairs and I have to congratulate all those who made it happen. They did an outstanding job". This was followed by a round of enthusiastic applause.

Cabin Fever is coming. The middle of January isn't far away. Bus riders should gather at Riverside Station at 8:30 AM on the morning of Friday January 16<sup>th</sup> and the bus will depart at 9:00 AM, sharp! It will stop somewhere on the Garden State Parkway for riders to have lunch. So far 31 people have signed up. The bus fare is \$62, based on 34 bus fares paid, but it could go up slightly if there are fewer passengers. Whether you travel by bus or not, you had to make a hotel reservation by December 16<sup>th</sup> to get the \$59 rate. There will be a Buffet set up for those who have signed up in advance on Friday evening.

Bob Neidorff prepared labels for our library, to identify the books as ours. Bob deserves a vote of thanks.

Bob mentioned that before the meeting, a member had come up to him and said that he never received the latest Gazette. Bob asked if anyone else expected to get a Gazette, but didn't. No one raised their hand.

*[Editor's note: If you weren't at the meeting, and are missing Gazettes, contact Bob Neidorff directly. His contact info is on the first page.]*

I would like to remind all to start preparing for our annual Model Engineering Show on February 21<sup>st</sup> at the Museum. Fliers have been printed, and they were available on the table at the meeting. Norm urged members to take a few and post them at your local library and anywhere else where they can be seen by the public.

### **Show & Tell**

Dave Piper has been regaling us with tales about the U.S. battleship "Ohio". He brought in prints of the engines from a German book printed about the turn of the 20<sup>th</sup> century. He discovered that a German fellow had made a model of the engine and so he got in touch with him and, as a result, showed us some pictures of this master-craftsman's superb handiwork. The acid test of a great model is this: If you can't tell from a picture whether you are looking at the real thing or a model, it is a great model. These all pass muster.

Frank Dorion retired a month ago. He showed up at the meeting with the product of the first month's of his retirement: a wooden Gatling gun that fired rubber bands. It takes a while to load and set up the soft-drink can target, and then brrrrt...

Earl Rich told us that "Everything is negotiable". The meeting was being held on the night of his wife's birthday. His bravery was recognized by the collective audience gasping for breath. He said the price of his attending the meeting that night was agreeing to take his wife to Disney World.

Venerable President Norm added that another member came back from Disney World and reported that they now have a display called "The Big Bang". To illustrate the Big Bang, 300 lbs of propane is ignited all at once (like a fuel-air bomb) and it explodes in a huge fireball. The heat from the fireball can be felt 1/2 mile away.

Mike Boucher also mentioned that the last time he was at Disney, he took an early morning tour of Disney World Railroad's back shop. The tour lasts about 3 hours, and cost \$30 per person. Advance reservations are required.

A high tech scale, about the size of a cell-phone was passed around. It cost \$60 and can weigh up to 200 grams, in 1/10 gram increments and is sensitive enough to weigh a postage stamp. The display can read either in metric (grams) or in carats.

### **The Mad Scientist Club**

The speaker at the December meeting was Erik Larson. Erik began with some biographical details.

Erik Larson and his father, Robert Larson, who was in the die-making business, were on a trip through Europe. Robert was introducing Erik to the die-making and die-cutting industry. The die-making industry is essential to many other industries. The die-cutting process has often been referred to as "an invisible process" because is it conducted within many converting operations. Consumers often do not realize that most items that they use on a daily basis have had one or more component parts die cut or trimmed in one of many types of die cutting systems using a wide range of die cutting tooling.

Here are a few of a long list of items that are die-cut: leather products such as footwear, wallets and handbags, folding cartons and corrugated boxes, packaging of all types, point of purchase displays, gaskets, computer floppy disks, contoured plywood seats for furniture, medical devices, clothing, wooden cocktail forks, flexible printed circuit boards, multi-contour floor mats for automobiles, the trimming of dashboards of automobiles, even die-cutting and molding of processed fish sticks and die cut sections of tobacco leaves for cigars.

Erik had recently joined the company and father and son were discussing how Erik could apply his talents to the company. Erik suggested developing a web site for people in the die-cutting process, and the creation of a global information resource web site began on a very hot summer evening in August 1993, in the town of Tilburg in Holland. They agreed that the idea of a web site devoted to the die-cutting process could have real

merit so it was decided to develop the idea and soon after <http://www.dieco.com> became a reality.

After setting up the web site, Erik became involved in the manufacture of guitars, eventually participating in the creation of two companies. He was forced by marketing pressures to master different manufacturing processes and the use of exotic materials. He was driven to introduce improvements that lead to cheaper and, at the same time, better instruments.

Eventually he gravitated to Vermont and became involved in the community. He was saddened to witness the disaster that befell the machine-tool industry there, with Jones & Lamson, Fellows Gear and other companies coming under the auctioneer's hammer. He set up the Sustainable Valley Group, trying to build a mutually-supporting web of small machine-tool users to spur learning and development of sustainable technologies and to create new industry networking opportunities. The Group has ties to the Springfield-based Inventors Network of Vermont.

Larson sees a continuing need for stronger American manufacturing capabilities. In future, he claims, smaller companies will take the place of the big monolithic corporations of the past.

This endeavor seems to be dependent on 'geezers' and is destined to fail unless new blood can be introduced continually, so his latest venture has been to set up a new club, the Mad Scientists Club. The club's aim is to create a community of interested young people together with retired engineers, machinists and the like to help spur learning and development of sustainable technologies. The idea, he said "is to get together with people who complement what you do." He envisages the Mad Scientists as a group where nerds are welcome, along with future employers, inventors, sustainability geeks, recyclers, and more. "I see this as the tinkering arm of the Inventor's network", he said.

The idea for the Club came from a short series of story books from the 1960's. The stories featured a group of children who had to solve given problems, forcing them to be creative and resourceful.

Max



## ***Treasurer's Report***

Rob McDougall

Dues for 2004 are due!

On the mailing labels for the January Gazette, some people will see this under their name:

Paid up to 12/31/2004

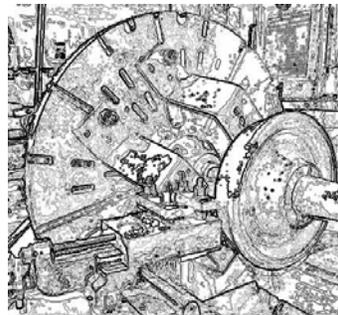
Others will see this:

Your membership will expire 12/31/03

A few other hobby organizations and magazines receive complimentary copies, and won't see anything out of the ordinary on their label.

Take a minute to look at your mailing label. If your dues have expired, this may be your last issue of the Gazette, so mail me a check for \$25. If you have paid, but it says you haven't, please contact me. My contact information is in the masthead of the Gazette.

Rob McDougall



## ***Museum Shop Update***

Fred Widmer and  
Max ben-Aaron

### ***The Museum's New Model Machines Gallery***

When the Charles River Internet Center was planned, the design included a gallery on the ramp that would separate it from the Charles River Museum of Industry. The original intention was to have an exhibit of the history of the telecommunications industry in the space that would be opened up. Karen Leblanc started the ball rolling by submitting a proposal to Verizon, which resulted in a grant that provided the railings and the alcoves for the new gallery.

When Dan Yeager assumed the directorship of the Museum, he realized that the implementation of the original plan would be very expensive; the

effort to raise the necessary funds could take years. So he revised the plan: the new gallery would be used to house rotating exhibits and would be home-grown. It would rely on assets and resources then available to the Museum.

Plans were made to start by having an exhibit of models -- both models owned by the Museum and models loaned by members of the New England Model Engineering Society. NEMES obviously has close ties to the Museum, and also provides many members of the 'Oil Can Gang', a collection of volunteers who work in the Museum on Thursdays, and who would provide most of the manpower needed to bring the new gallery into existence.

Stands for the exhibits in the alcoves were designed, and students in the Waltham High School were co-opted to fabricate the necessary steel supports. Under the able guidance of Dan and Fred Widmer, the stands were installed and capped with oval table-tops. Bill Nolan put up and wired the track lighting that makes the display so dramatic.

Meanwhile, the Museum's model collection was surveyed and a number of models were refurbished for the exhibit. President Norm Jones and members Dick Boucher, Todd Cahill, and Mike Boucher generously provided some of their models for display, on behalf of NEMES.

The exhibit was scheduled to open on November 25<sup>th</sup>, when the Museum would be celebrating its annual Founder's Day, which commemorates Michael Folsom, whose efforts brought the Museum into being. As the due date approached, the intensity of the effort increased, and the Thursday volunteer group ended up working furiously on Friday, Monday and Tuesday, almost up to the very last minute. The exhibit was finally ready, about an hour before the opening.

Before dinner, guests were treated to a demonstration of the new line-shaft installation, with the little Rhodes shaper manfully working across the face of a cast iron block. Glittering models, several running under compressed air, were show-cased splendidly under carefully focused spotlights, an auspicious start to the newly-inaugurated gallery.

At the entrance to the gallery, a striking model of a 3 1/2" gauge 'Virginia' live-steam locomotive, made by Walter Bush, is juxtaposed with Dick

Boucher's chassis, also of a 'Virginia'. Mounted on a lower tier, is the Museum's magnificent 4 3/4" gauge 'Flying Scot' locomotive, another Walter Bush creation. Opposite, next to the Museum's own double-expansion steam engine model, made by George Eli Whitney when he was ninety years old, is George Collord's working triple-expansion model, also by Whitney. This tour-de-force has a different reversing gear for each cylinder -- Walschaert's, Marshall and Fink, and they all work.

A steeple engine and a beam engine by Todd Cahill, Mike Boucher's oscillating marine engine and Norm Jones' make-or-break gas engine and double-acting steam engine round out the NEMES contributions. The extraordinary quality of their models (and Dick's) is a credit to NEMES. All in all, this is a great display of superb craftsmanship; it would not be out of place in the Science Museum in London.

The gallery could not have been achieved without the hard work of Karen Leblanc, Dan Yeager, Bill Nolan and the 'Oil Can Gang': Fred Widmer, Bill Brackett, Bradley Ross, Dick Boucher, Finnbar Murphy, Max ben-Aaron.

*Fred and Max*

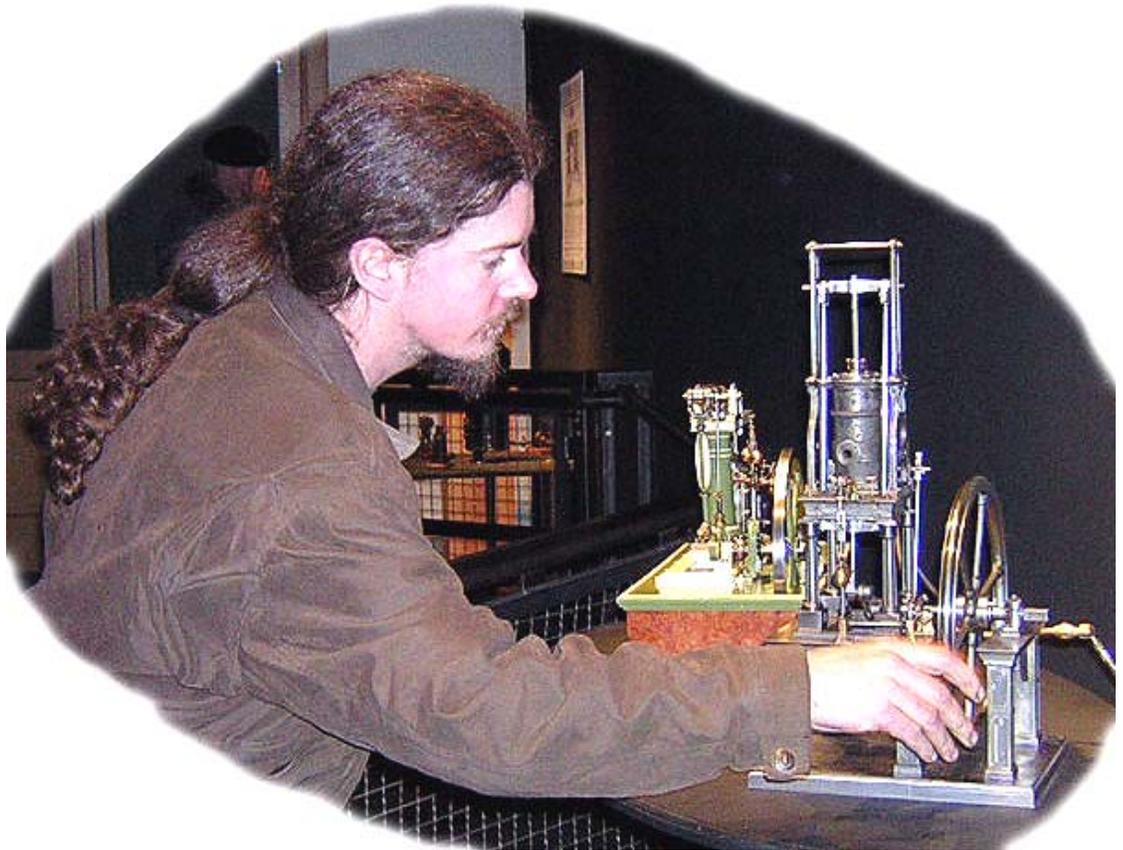
### ***Photos from the exhibit are on the next pages!***

*[Editor's note: Forgive me if the photos hard to see. The walls of the exhibit space are painted black to make the engines stand out. However, that makes for photos that are hard to print. I've tried to remove some of the dark background as best I can. If you can't see the photos, come to the museum to see the display in person! ☺ ]*



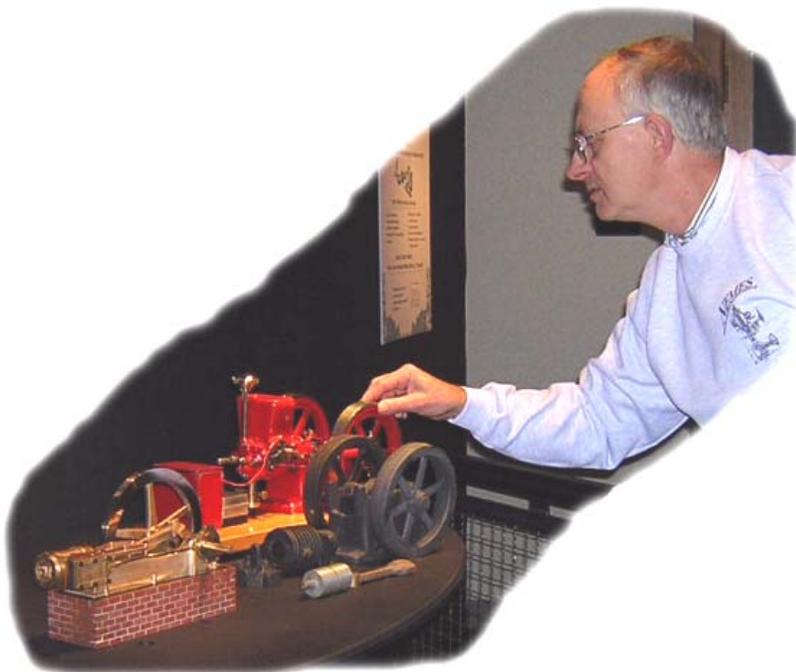
← The sign over the entry to the display

Todd Cahill starts his steeple engine running. Several of the steam engines have an air-line running to them so the museum staff can start them operating.



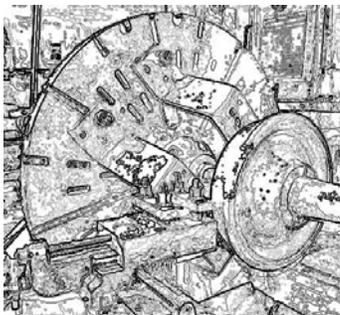


↑ Dick Boucher reaches over the late Walter Bush's "Flying Scotsman" to adjust the cutoff on his 3 ½" gauge "Virginia" chassis. A completed "Virginia", also built by Walter Bush, sits in the background. Like Todd's engine, the chassis is connected to an air-line. Having it suspended in air makes it easy for spectators to view the valve gear. The locomotive print hanging on the wall is a nice touch!



← Norm Jones checks to make sure his model hit-and-miss engine still turns over.

The casting set under Norm's hand is basically the same engine as the one he's inspecting. The casting set is the air-cooled version, the finished version is water cooled.



## ***Shop Hints***

Compiled by  
Mike Boucher

### ***Snow Thrower Repair***

By Bob Neidorff

Those of you who read the NEMES mailing list (<http://groups.yahoo.com/groups/nemes>) may recall that my snow blower died during the snow storm on Sunday December 6. The engine seized after five minutes of running.

I thought that it had enough oil, but I was wrong. It was low on oil. That explains why it seized. I posted a question to the club by e-mail asking for advice. The only answer that seemed helpful was to throw it away and buy a new one. If you know me, you'll know that I don't give up that easily.

Someone on the Tecumseh engine mailing list ([http://groups.yahoo.com/groups/tecumseh\\_engine\\_group](http://groups.yahoo.com/groups/tecumseh_engine_group)) advised me to put some penetrating oil in the spark plug hole to try to free the piston, then unbolt the head and whack on the piston with a block of wood and a hammer. It sounded like severe torture for an engine, so I did it. Actually, banging on a piston with a hammer may not be much more severe than the forces from normal combustion above the piston.

I put 4 ounces of Marvel Mystery Oil into the spark plug hole and let it sit for a few days. On Saturday morning, with another snowstorm looming, I removed the sheet metal around the engine and unbolted the "head". For a small engine like this 8HP Tecumseh HMSK80, the "head" is really a combination valve cover and piston cover, so when I unbolted this cast aluminum cover, it exposed the two valves and the top of the piston.

Then I took a 2" diameter wooden dowel and put it on top of the piston, and banged on it pretty hard with a two-pound hammer. It didn't seem to free up on the first bang, so I hit it again...and again. After 10 pounds, I was pretty sure that the piston had indeed moved. I hit it one more time

and actually saw the flywheel turn a tiny bit. Success! So I stopped banging and reassembled the snow blower. The only thing that I left out was the spark plug, so that the engine would spin more freely.

Then I grabbed the start rope. With a lot of force, I was able to get the rope and engine to move slightly. So I stopped and added oil to the crankcase. I got it to "full" and waited for it to settle in. Then I pulled again, and it was still very hard to move. I pulled it a few more times, and was convinced that it was getting better, but it was still quite stiff. After 10 gentle pulls, the oil did its magic and the engine was spinning freely, almost like new!

I put the spark plug in, and tried to start the engine. It started very quickly, and billowed smoke from all of the penetrating oil. I let that burn off then stopped the engine. I figured that some of the penetrating oil must have mixed into the crankcase, and that wasn't good for the engine, so I drained the oil and refilled it with fresh oil. I can't believe it, but now it's running like new. People have warned me that, once you repair an engine like this, its life may be severely reduced, but for now, I feel confident in being able to clear the driveway for the next storm.

Once again, this proves that with a little guidance and a lot of confidence (and the knowledge that Home Depot sold out of snow blowers last weekend), a model engineer can fix nearly anything.

Postscript: I wrote this article Sunday morning, as we're expecting a snow storm. It's now Monday at 9:30AM. The snow blower cleared my 250-foot driveway of 10" of wet snow this morning without one sign of fatigue or problems.

*Bob Neidorff*

### ***Shipping Machinery***

Bob Neidorff sent this along. It was originally posted by Dee Schuyler on the Logan Lathe list.

"For anyone who is lucky enough to have purchased a machine and then come to the cold realization that it's in the wrong place, *Yesterday's Tractors Magazine* has a website where people post their antique tractor hauling schedules and accept requests from others to hitch a ride for a modest fee."

<http://www.ytmag.com/cgi-bin/haulquery.pl>

I checked out the site, and there were a LOT of people there either hitching or offering a trailer to haul equipment. The first 100 "ads" were no more than 2 weeks old.

***Caveat Emptor!***

By Jim Paquette

I would like to post a "Buyer Beware" in the gazette regarding a tool company that I have had repeated trouble with.

Shars Tool Company, of Addison Illinois, has very attractive prices in their catalog, but you may not get the product as pictured or described. On my last 2 orders they substituted different items.

On the last order, they shipped an incomplete item. When I contacted them, they would not send me the missing part, even though it was pictured and included in the written description. They wanted more money before they would send me the missing part. **BUYER BEWARE!!**

Jim



***For Sale***

***Wanted – Hydro test pump***

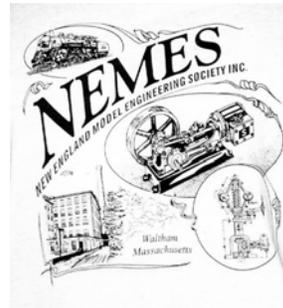
The Museum has an air compressor tank that needs a hydrostatic test. If any NEMES member knows where we can borrow a suitable pump (400 lb/sq. in. capacity) and a calibrated gauge, please e-mail Max ben-Aaron at

[xeno3579@cs.com](mailto:xeno3579@cs.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](mailto:errol.groff@snet.net)

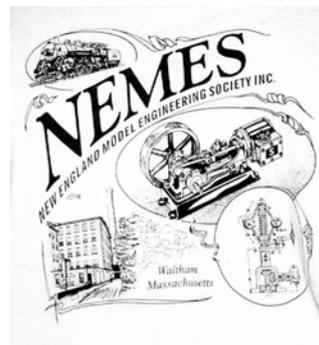


***NEMES clothing***

NEMES tee shirts and sweat shirts are available in sizes from S to XXXL. The tee shirts are gray, short sleeve shirt, Hanes 50-50. You won't shrink this shirt! The sweat shirts are the same color, but long sleeve and a crew neck. Also 50-50, but these are by Lee. The sweat shirts are very comfortable!

Artwork by Richard Sabol, printed on front and back.

Artwork:



Rear

Front

Prices:

	Tee Shirts	Sweat Shirts
S - L	\$12.00	\$22.00
XXL	\$14.00	\$24.00
XXXL	\$15.00	\$25.00

Add \$5 shipping and handling for the first tee shirt, \$1 for each additional shirt shipped to the same address. Sweat shirts are \$7 for shipping the first, and \$1.50 for each additional sweat shirt.

Profits go to the club treasury.

Mike Boucher  
10 May's Field Rd  
Lunenburg, MA 01462-1263  
[mdbouch@hotmail.com](mailto: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 [wbrackett@rcn.com](mailto:wbrackett@rcn.com) or (508) 393-6290.

### **Jan 1 – Waushakum Live Steamers “New Years Day” run**

Waushakum Live Steamers, Holliston, MA  
John Mentzer

<http://www.steamingpriest.com/wls>

### **Jan 17-18 - Cabin Fever Expo**

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

<http://www.cabinfeverexpo.com/>

### **Feb 5 - NEMES Monthly club meeting**

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

### **Feb 7-8 - Amherst Railway Society**

Model Railroad show at the Big E, Springfield, MA

<http://www.amherstrail.org>

### **Feb 21 - 8th Annual NEMES Model show**

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

Bill



## **Web Sites of Interest**

### **The Locator**

Dave Robie sent this interesting web site, *THE LOCATOR*, a magazine listing of available used machinery, equipment and plant services. This is the place to go if you need a used CNC mill that if new would cost \$250,000, but it has a section of low cost machines and tooling also. Locator specializes in listing plant liquidations and a lot of machinery dealers advertise on it.

<http://www.locatoronline.com/>

[Editor's Note: I checked it out, and just for yahoos, found 7 shapers under "misc machines". The smallest was a 24" Cincinnati!]

### **Hommel lathe/mill**

Jim Paquette sent me this link about a Hommel machine. He describes it as "a Unimat on steroids". Apparently, that these machines were used on U Boats during WWII.

<http://www.lathes.co.uk/hommel/index.html>

Very interesting piece of machinery

### **Advice on Inspecting a Used Lathe**

As part of the "Shop Hints" on shipping machinery that Bob Neidorff sent, there was also this link on inspecting a lathe, either before a private sale or as part of an auction. I gave it a read, and there's some good advice in it.

<http://www.meramac.com/advice.html>