



# The NEMES Gazette

NEW ENGLAND MODEL ENGINEERING SOCIETY INC.

No. 145

May 2008

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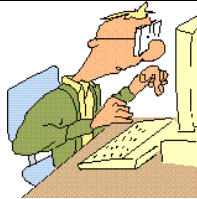
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## Editor's Desk

Victor Kozakevich

A favorite topic of conversation among NEMES members is the lack of a hands-on sensibility with most Americans.

I saw a piece on 60 Minutes last week about a man undergoing chemotherapy and its side effects, who thought there should be a better way. With lots of time on his hands, he read all the medical books he could, and having some experience with radio waves, he thought up a new way to kill cancer cells. His proof of concept device involved some of his wife's pie tins and a hotdog injected with metallic particles. When the hotdog was exposed to radio waves concentrated by the pie pans, only the injected areas of the hot dog heated up.

Now that he's got the interest of the medical community, the next step is to link metallic nanoparticles to antibodies that will drag the little targets into cancer cells.

Perhaps this is an indicator of a renaissance in American ingenuity. Maybe some high school kid who reads *Make* magazine will, in a few years, give us a gasoline substitute for 10 cents a gallon.

## Next Meeting

Thursday, May 1, 2008

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

## Membership Info

Annual dues of \$25 (via checks made payable to "NEMES" and mailed to our membership secretary) for the calendar year are due by December 31<sup>st</sup> of the prior year.

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

Addresses are in the left column.

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## President's Corner

Dick Boucher

### The Meeting

This month our speaker will be David Beard. I heard David give a presentation on early engine ignition systems at a meeting of the New Hampshire Power of the Past Collectors Club meeting and found him very informative. He has a number of samples of igniters and magnetos for a close up look at these parts and their operation.

### Miscellaneous Ramblings

Well, the shop is really getting lonesome for my company lately. With the good weather and the fire chief allowing burning in town, I have been getting an invasion of Bittersweet vines out of the trees around my property, along with getting rid of a number of Norway Maples that have sprung up in the last couple years. The Norway's are such an invasive species the nurseries are not allowed to sell them anymore.

The good news is that work is almost finished and will be definitely a thing of the past on May 4<sup>th</sup>, the Sunday when the New Hampshire Power of the Past Collectors host the traditional season opener engine show. I say that realizing that there is now "Frostbite Meets", but this is the first show in good weather. I haven't spoken to Norm but I am certain that he will be there with a tent in case of bad weather, so try to make it to this show and bring something to display. You might even get to meet my little red headed tractor-loving grandson.

I am sure glad to have the show season here again as it hopefully will make the ramblings easier to write, as I review the shows I am able to make. I don't think I will be roaming as far and wide as Errol does, but never the less, I will be taking in a few events.

Speaking of Errol, he sent an idea around on the NEMES yahoo list about a film festival put on by the Long Island Metalworkers Society. It sounds like a great idea and might be worth attending.

Dick B.

P.S. Don't forget Victor is looking to step down as Gazette editor. This could be your chance to help the society in a big way.

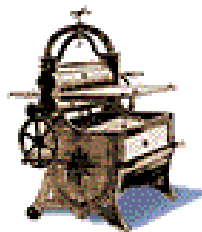


## Planes, Trains & Automobiles

The Owls Head Transportation Museum <http://www.ohm.org/> in Owls Head, Maine, has invited NEMES members to show at their Summer Spectacular Show on July 26-27. They are delighted that we are participating and have assigned us the best display area possible, under cover and right at the front of the main hanger. They will provide the tables, chairs and air so the set up will be the same as we are used to at Cabin Fever. The Summer Spectacular is their largest event with thousands of people, many vintage airplanes from all over the country, hundreds of vintage cars and a spectacular air show. If you haven't been to the OHTM you will be delighted you came.

To prepare for the show we need to know who is attending, so if you plan to come please drop me a line at [clocks@midcoast.com](mailto:clocks@midcoast.com) and let me know how much space you will need. If you have questions or if you plan to stay overnight and need assistance in finding lodging you may call me at 207-236-3632. Hope to see you there.

James Lea



## NEMES Gazette Editorial Schedule

Issue	closing date for contributions
June '08	May 23, 2008
July '08	June 20, 2008
August '08	July 25, 2008
September '08	August 22, 2008



## ***The Meeting***

Todd Cahill

### **April 2008**

Due to improperly saving the April meeting notes, I have lost them and did not have the time to rewrite them in time for publishing. I apologize for the absence of them this month. If I find a way to retrieve the notes, I will include them in next month's newsletter.

It should, however, be noted a donation to The Charles River Museum of Industry in the amount of \$1250.00 was voted upon and approved.

T.D.C.



**photo by Al Goldberg**

For those who can't wait, I'd like to mention that April's speaker was Peter Baldwin, president of Ramgen Power Systems. Most of the information from his presentation can be found on the <http://www.ramgen.com/index.html> website. Click on the Applications heading, the CO2 compressor subtopics;

- The Need
- Carbon Capture and Storage
- Ramgen's Unique CO2 Compressor

-Editor



## ***The Steam Man of the Prairies***

BY EDWARDS ELLIS,



## ***The Steam Man of the Prairies.***

BY EDWARDS ELLIS,

### **CHAPTER V.**

#### **ON THE YELLOWSTONE.**

BALDY Bicknell was a hunter and trapper who, at the time we bring him to the notice of the reader, had spent something over ten years among the mountains and prairies of the West.

He was a brave, skillful hunter, who had been engaged in many desperate affrays with the red-skins, and who, in addition to the loss of the hair upon the crown of his head, bore many, other mementos on his person of the wild and dangerous life that he had led.

Like most of his class, he was a restless being, constantly flitting back and forth between the frontier towns and the western wilds. He never went

further east than St. Louis, while his wanderings, on more than one occasion, had led him beyond the Rocky Mountains.

One autumn he reached the Yellowstone, near the head of navigation, just as a small trading propeller was descending the stream. As much from the novelty of the thing, as anything else, he rode on board, with his horse, with the intention of completing his journey east by water.

On board the steamer he first met Ethan Hopkins and Mickey McSquizzle, who had spent ten years in California, in a vain hunt for gold, and were now returning to their homes, thoroughly disgusted with the country, its inhabitants and mineral resources.

Baldy was attracted to them by their peculiarities of manner; but it is not probable that anything further would have resulted from this accidental meeting, but for a most startling and unforeseen occurrence.

While still in the upper waters of the Yellowstone, the steamer exploded her boiler, making a complete wreck of the boat and its contents. The hunter, with the others, was thrown into the water, but was so bruised and injured that he found it impossible to swim, and he would assuredly have been drowned but for the timely assistance of his two acquaintances.

Neither the Yankee nor Irishman were hurt in the least, and both falling near the trapper, they instantly perceived his helplessness and came to his rescue. Both were excellent swimmers, and had no difficulty in saving him.

“Do ye rist aisy!” said Mickey, as he saw the hunter’s face contorted with pain, as he vainly struggled in the water, “and it’s ourselves that’ll take the good care of yees jist.”

“Stop yer confounded floundering,” admonished Hopkins; “it won’t do no good, and there ain’t no necessity for it.”

One of them took the arm upon one side, and the other the same upon the opposite side, and struck out for the shore. The poor trapper realized his dire extremity, and remained motionless while they towed him along.

“Aisy jist—aisy now!” admonished Mickey: “ye’re in a bad fix; but by the blessin’ of Heaven

we’ll do the fair thing wid yees. We understand the science of swimmin’, and—”

At that moment some drowning wretch caught the foot of the Irishman, and he was instantly drawn under water out of sight.

Neither Hopkins nor Baldy lost presence of mind in this fearful moment, but continued their progress toward shore, as though nothing of the kind had happened.

As for the Irishman, his situation for the time was exceedingly critical. The man who had clutched his foot did so with the grasp of a drowning man; in their struggle both went to the bottom of the river together. Here, by a furious effort, Mickey shook him free, and coming to the surface, struck out again for the suffering hunter.

“It is sorry I am that I was compelled to leave yees behind,” he muttered, glancing over his shoulder in search of the poor fellow from whom he had just freed himself; “but yees are past helpin’, and so it’s meself that must attend to the poor gentleman ahead.”

Striking powerfully out, he soon came beside his friends again and took the drooping arm of Baldy Bicknell.

“Be yees sufferin’ to a great extent?” inquired the kind-hearted Irishman, looking at the white face of the silent hunter.

“Got a purty good whack over the back,” he replied, between his compressed lips, as he forced back all expression of pain.

“Ye’ll be aisier when we fotch ye to the land, as me uncle obsarved whin he hauled the big fish ashore that was thrashing his line to pieces jist.”

“Twon’t take you long to git over it,” added Hopkins, anxious to give his grain of consolation; “you look, now, like quite a healthy young man.”

The current was quite rapid, and it was no light labor to tow the helpless hunter ashore; but the two friends succeeded, and at length drew him out upon the land and stretched him upon the sward.

The exertion of keeping their charge afloat, and breasting the current at the same time, carried them a considerable distance downstream, and they landed perhaps an eighth of a mile below where the main body of shivering wretches were congregated.

“Do yees feel aisy?” inquired Mickey, when the hunter had been laid upon the grass, beneath some overhanging bushes.

“Yes—I’ll soon git over it—but woofh! that ar war a whack of the biggest kind I got. It has made me powerful weak.”

“What might it have been naow!” inquired Hopkins.

“Can’t say—fust thing I know’d, I didn’t know nothin’—remember suthin’ took me back the head, and the next thing I kerwholloped in the water.”

The three men had lost everything except what was on their bodies when the catastrophe occurred. Their horses were gone, and they hadn’t a gun between them; nothing but two revolvers, and about a half dozen charges for each.

Of the twenty odd who were upon the steamer at the time of the explosion, nearly one-half were killed; they sinking to the bottom almost as suddenly as the wrecked steamer, of which not a single trace now remained.

The survivors made their way to land, reaching it a short distance below their starting point, and here they assembled, to commiserate with each other upon their hapless lot and determine how they were to reach home.

Our three friends had remained upon shore about half an hour, the two waiting for the third to recover, when the latter raised himself upon his elbow in the attitude of listening. At the same time he waved his hand for the others to hold their peace.

A moment later he said:

“I hear Injins!”

“Begorra! where bees the same?” demanded Mickey, starting to his feet, while Ethan gazed alarmedly about.

“Jist take a squint up the river, and tell me ef they ain’t pitchin’ into the poor critters thar.”

Through the sheltering trees and undergrowth, which partly protected them, the two men gazed up-stream. To their horror, they saw fully fifty Indians massacring the survivors of the wreck—whooping, screeching and yelling like demons, while their poor victims were vainly endeavoring to escape them.

“Begorra, now, but that looks bad!” exclaimed the Irishman. “Be the same towken, what is it that we can do?”

“Jerusalem! they’ll be sure to pay us a visit—I’ll be gummed if they won’t,” added the Yankee, in some trepidation, as he cowered down again by the side of the hunter, and said to him in a lower voice:

“The worst of it is, we haven’t got a gun atwixt us. Of course we shall stick by you if we have to lose our heads fur it. But don’t you think they’ll pay us a visit?”

“Like ‘nough!” was the indifferent reply of the hunter, as he laid his head back again, as if tired of listening to the tumult.

“Can’t we do anything to get you out of danger?”

“Can’t see that you kin; you two fellers have done me a good turn in gittin’ me ashore—so jist leave me yere, and it don’t make no difference about me one way or t’other. Ef I hear ‘em comin’ I’ll jist roll into the water and go under in that style.”

“May the Howly Vargin niver smile upon us if see desart you in this extremity,” was the reply of the fervent-hearted Irishman.

“And by the jumpin’ jingo! if we was consarnedly mean enough to do it, there ain’t no need of it.”

As the Yankee spoke, he ran down to the river, and walking out a short distance, caught a log drifting by and drew it in.

“Naow, Mr. Baldy, or Mr. Bicknell, as you call yourself, we’ll all three git hold of that and float down the river till we git beyond fear of the savages.”

The plan was a good one, and the hunter so expressed himself. With some help be managed to crawl to the river bank, where one arm was placed over the log, in such a manner that he could easily float, without any danger of sinking.

“Keep as close to shore as you kin,” he said, as they were about shoving off.

“We can go faster in the middle,” said Hopkins.

“But the reds ‘ll see us, and it ‘ll be all up then.”

This was the warning of prudence, and it was heeded.

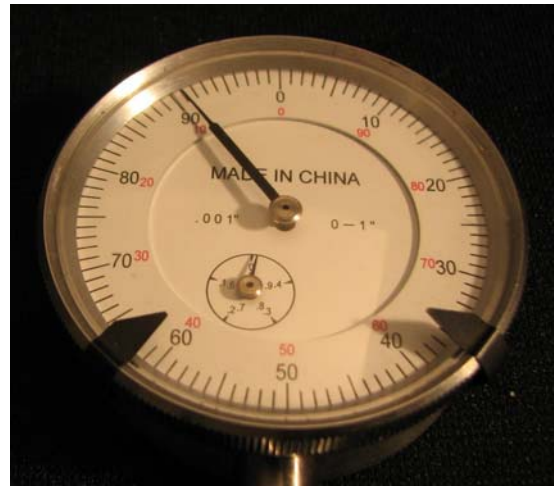


## Shop Tips

### Dial Indicators...or...Who Needs Jewels?

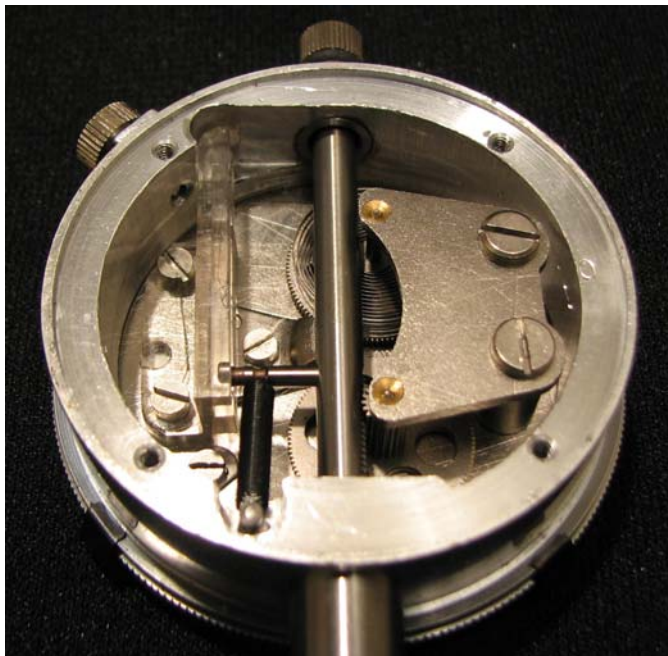
Dial indicators come in very handy. You can use them for positioning stock on the lathe, for setting up stock in the mill, for measuring precise distances on uncalibrated fixtures, for measuring parts on a stand, and for many other purposes. I've acquired a small collection of them over the years, and recently bought a new one from MSC. The new one is made in China, and was very inexpensive. I figured that the best indicators will last much longer due to jewels in the movement, but for my use, plain bearings will be adequate, so I bought the cheapest one I could find.

Before setting it up for my intended use, I removed the lugged back and "peeked inside". I was aghast at what I found. Yes, there are no jewels. Even worse, one of the sliding parts was simple clear plastic, perhaps acrylic.



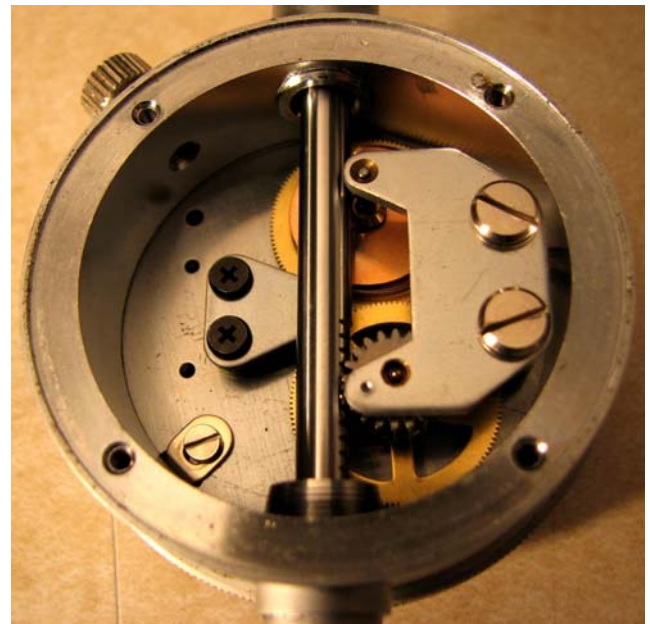
Front view of a Chinese Dial Indicator

This motivated me to open my other indicators, as much for a learning experience as to see if any of the others were also plastic inside. I was pleasantly surprised that the rest all appeared to be well made using quality materials. Here are some photos of other indicators.



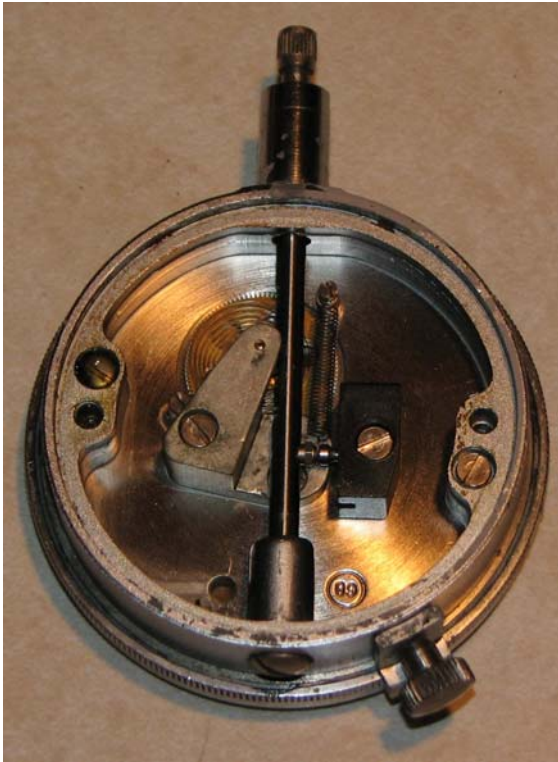
Chinese 2" Diameter, 1" Travel Indicator

The part to the left of the vertical black spring is a plastic guide.

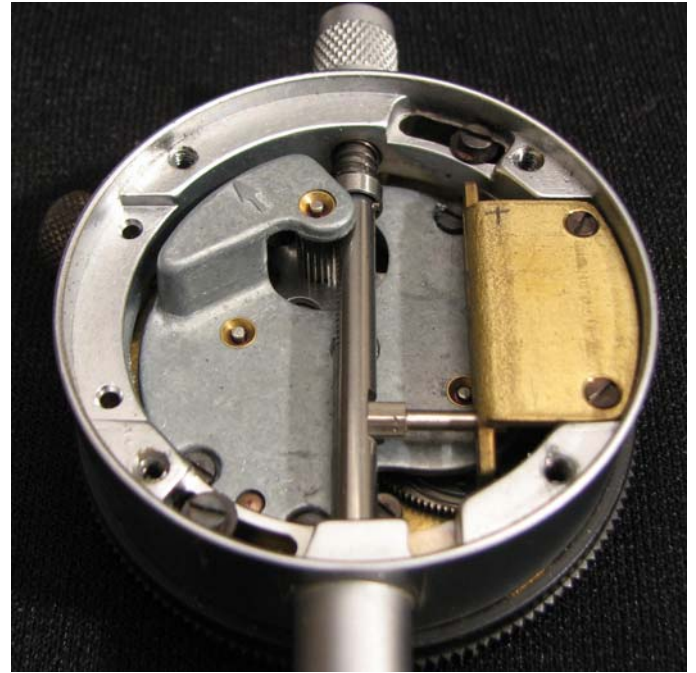


Teclock 2" Travel Jeweled Dial Indicator

The Teclock indicator above looks very similar to the Chinese indicator, but has better materials and construction. It also travels much smoother. This indicator has served me very well over the years. Even though this is a jeweled, made in Japan indicator, some consider Teclock lower quality than Brown & Sharpe or Mitutoyo. Teclock also rebrands some indicators SPI and Fowler.



**Ames 3" Diameter Short Travel Indicator**



**Jeweled Starrett 2" Diameter Indicator with 0.05" Travel and 0.0001" Resolution**



**Ames 1" Diameter Short Travel Indicator**



**Dovetail Mount for Lathe QC Toolpost**

Would I ever buy a cheap Chinese dial indicator again? Perhaps. It's nice to know that you can abuse them and not worry about destroying an expensive tool. Also, at under \$10 each, I can afford to buy lots of them and use them everywhere. I made a simple aluminum dovetail mount for one that fits my lathe quick-change toolpost. It's great to quickly set up stock in the four-jaw chuck.

Another one of my Chinese indicators has a strong magnet bolted to the back, so that I can quickly stick it to the lathe or mill and measure travel on any axis.

However, if you want a tool with long life, perhaps these Chinese indicators should not be on the list. As Vic says, "You get what you pay for."

Here's a simple tip for adapting lug-backed dial indicators to your next job. You can unscrew the back of many of these dial indicators and reposition the back rotated 90 degrees, so that the lug is horizontal rather than vertical. This is better for some jobs, such as attaching the indicator to a stand.

For more information, Long Island Indicator Service has a superb website with a wealth of information on many brands of dial indicators:

<http://www.LongIslandIndicator.com>

-Bob Neidorff



**For Sale**

### Rockwell Milling Machine

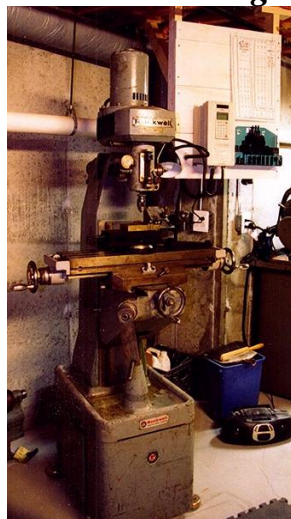


Table is 24" x 6½", working area about 13" x 6", with 3 tee slots. Quill moves about 3" down. About 12" of Knee travel. There is some backlash in the table, the X is .004 or so. The Y is about .014. 3 phase motor. 5 speed pulley. Takes R8 collets in the spindle. Has a brake on the spindle. Comes with a clamping set and some R8 collets. but no vise.

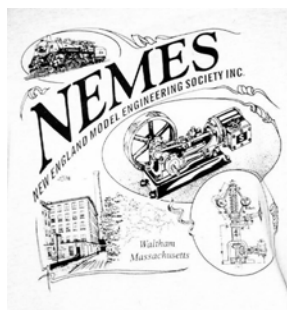
About the size of a Clausing, but I think it's a heftier machine. In a basement with a ground level entry, so it'll be easy to get out and onto your trailer. Asking \$1200. Call (978) 345-7741 for more info.

### 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. The CD now has a lot more info on it, and the price has increased accordingly. \$10.00, shipping included.

Errol Groff  
180 Middle Road  
Preston, CT 06365 8206  
[errol.groff@snet.net](mailto:errol.groff@snet.net)



**NEMES clothing**

### NEMES Shop Apron



Look your best in the shop! The NEMES shop apron keeps clothes clean while holding essential measuring tools in the front pockets. The custom strap design keeps weight off your neck and easily ties at the side. The apron is washable blue denim with an embroidered NEMES logo on top pocket.

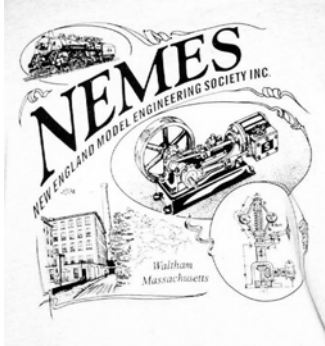
Contact Rollie Gaucher 508-885-2277



**NEMES Tee Shirts**

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:



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)



**Shop Help**

I received this press release from Nancy Hoggson at the APM, wondering if our members might know someone interested in helping.

-Editor

**AMERICAN PRECISION MUSEUM SEEKS VOLUNTEER INTERPRETERS FOR WORKING MACHINE SHOP**

**WINDSOR:** The American Precision Museum in Windsor, Vermont is recruiting adult volunteer interpreters to staff its new working machine shop scheduled to open May 24, 2008. The shop is an innovative manufacturing-cultural heritage partnership with funding from the Vermont Department of Labor's Workforce Education and Training Fund Internship Program. The volunteer interpreters will work with student interns at the museum during the 2008 exhibit season.

This new initiative is a partnership between the American Precision Museum (APM), in Windsor VT and the River Valley Technical Center (RVTC) in Springfield, VT. The machine shop will integrate historic machines from the museum's education collection with contemporary computerized numerical control (CNC) machines on loan from RVTC.

Christopher Gray, an RVTC instructor, and the museum staff will train the adult volunteer and student intern interpreters to operate the shop, and convey how the historic tools worked, and how modern computer-driven tools are based on them, as well as the importance of Vermont's precision manufacturing sector to the region and manufacturing throughout the nation and the world.

The American Precision Museum in Windsor is housed in the 1846 Robbins and Lawrence Armory, a National Historic Landmark. The building is a classic example of a mid-nineteenth century water-powered mill site. It was in this building that the artisan craft of gunmaking was transformed into a true manufacturing process through the development of machine tools that created interchangeable parts. Although much of the museum's highly regarded collection of historic machine tools has been on display for years, it is trained and enthusiastic interpreters who make the story of the machines and their work come alive for visitors.

The Manufacturing and Engineering Laboratory at the RVTC is one of only a hand-full of fully functional manufacturing training facilities in Vermont. Its state-of-the-art machine shop has more than 25 functioning manual and CNC machining centers.

Contact the American Precision Museum at [info@americanprecision.org](mailto:info@americanprecision.org) or 802-674-5781 for more information. The museum exhibits are open daily 10-5 from Memorial Day weekend through the end of October.



**MARK  
THIS  
DATE**

## **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 [thebracketts@verizon.net](mailto:thebracketts@verizon.net) or (508) 393-6290.

*Bill*

May 1<sup>st</sup> Thursday 7PM  
NEMES Monthly club meeting  
Charles River Museum of Industry  
Waltham, MA; 781-893-5410  
<http://www.neme-s.org>

May 3<sup>rd</sup> Connecticut Antique Machinery  
Museum Spring Power Up - Route 7; Kent Ct.  
John Pawlowski President  
P.O. Box 1467, New Milford, CT 06776  
<http://www.ctamachinery.com/SpringPowerUP.html>

May 3<sup>rd</sup> NHPOTP engine show  
RT 113 Dunstable MA  
Robt Wilkie 207-748-1092

May 17<sup>th</sup> Iron pour and model show  
Saugus Iron Works  
<http://saugusironworks.areaparks.com/>  
Ed Rodgers (781) 233-3847

May 18<sup>th</sup> Steam-up  
Waushakum Live Steamers  
Holliston MA  
<http://www.steamingpriest.com/wls>

May 18 9:00am The Flea at MIT  
Albany Street Garage at the corner of Albany and  
Main Streets in Cambridge  
<http://web.mit.edu/w1mx/www/swapfest.shtml>

May 20-21 9:00-5:00 and 22 9:00-3:00  
EASTEC at Eastern States Expo  
West Springfield MA; 800-733-4763  
[www.sme.org/eastec](http://www.sme.org/eastec)

May 24-25 Bernardston Show  
Rt 10 off Rt 91 Bernardston, MA  
Vickie Ovitt 413-648-5215

May 24<sup>th</sup> American Precision Museum opens  
<http://www.americanprecision.org/>

May 25<sup>th</sup> Spring Auto & Antique Aeroplane Show  
Owls Head Transportation Museum Owls ME  
<http://www.ohtm.org/>

June 5<sup>th</sup> Thursday 7PM  
NEMES Monthly club meeting  
Charles River Museum of Industry  
Waltham, MA; 781-893-5410  
<http://www.neme-s.org>

June 15<sup>th</sup> Hot Rods, Muscle Cars & Tuners &  
Antique Aeroplane Show  
Owls Head Transportation Museum Owls ME  
<http://www.ohtm.org/>

June 13-15 10:00-3:00 Father's Day Meet  
Pioneer Valley Live Steamers  
Southwick MA.  
<http://www.pioneervalleylivesteamers.org>

June 15<sup>th</sup> 9:00am The Flea at MIT  
Albany Street Garage at the corner of Albany and  
Main Streets in Cambridge  
<http://web.mit.edu/w1mx/www/swapfest.shtml>

June 22 NSOCC Show  
Topsfield Fair Grounds  
Ed Rogers 781-233-3847

June 28-29 Orange Show  
Orange Airport Orange MA

June 29<sup>th</sup> Ford Festival Model Ts to Mustangs  
Owls Head Transportation Museum Owls ME  
<http://www.ohtm.org/>